

STRIKE FORCE™

Dramatically styled flying model rockets of military missiles from around the world.

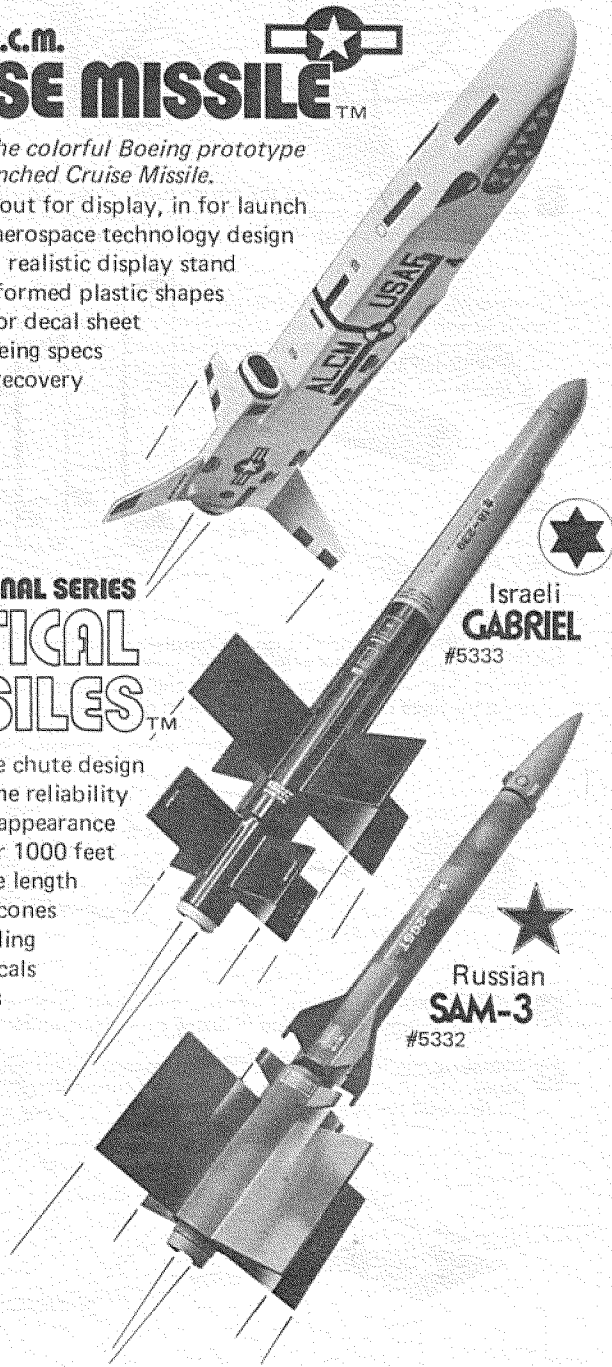
BOEING A.L.C.M. CRUISE MISSILE™

Scaled from the colorful Boeing prototype of the Air launched Cruise Missile.

- Wings fold out for display, in for launch
- Advanced aerospace technology design
- Pre-colored realistic display stand
- 3 types of formed plastic shapes
- Huge 4-color decal sheet
- Official Boeing specs
- Parachute recovery

INTERNATIONAL SERIES TACTICAL MISSILES™

- Camouflage chute design
- Single engine reliability
- Multistage appearance
- Flights over 1000 feet
- 14" average length
- Balsa nose cones
- Body detailing
- Military decals
- Pre-cut fins
- Tech data



FROM THE **Centuri** SERIES

STRIKE FORCE™

#5331 ITALIAN Sea Killer

The "Strike Force" Tactical Missiles are a family of scale-like model rockets designed after famous military missiles. Each missile has been slightly re-designed for safe and stable model rocket flight.

Real Tactical Missiles are designed for flight at much higher speeds than model rockets fly at. The fin area and placement used on the real missiles are designed to give high performance. Model rockets are much lighter and operate at much lower speeds, so minor modifications have to be made to the fins.

While this kit is not a scale model of the real Tactical Missile, it is designed to look similar to the missile and still fly in a stable manner to many hundreds of feet. The "Strike Force" series of military missiles is the first complete line of weapons in model rocketry. Collect the whole series!



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

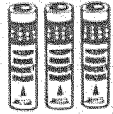
I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.

HOW IT WORKS

Your Tactical Missile model rocket is designed to fly in the same manner as other model rocket kits. The electrically ignited engine provides the power to boost the rocket to peak altitude. The rocket is guided off the launcher by a launch rod. At peak altitude the engine's ejection charge is activated to eject the parachute. The Tactical Missile returns to earth by parachute, ready 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.

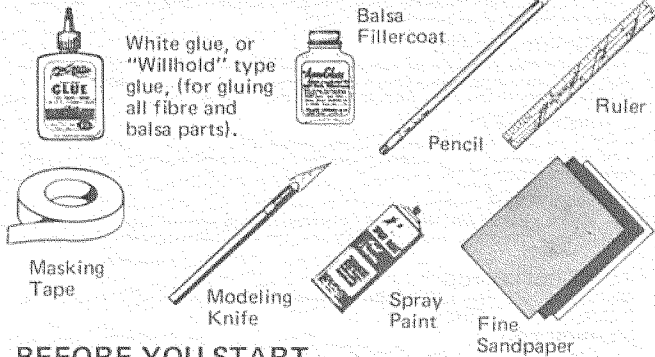
RIGHT MATERIALS FOR THE JOB

Different model rocket kits are made out of a 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
Nose Cone Fins	<ul style="list-style-type: none"> • Light Weight • Strength 	Balsa
Body	<ul style="list-style-type: none"> • Strength • Safe 	Paper

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).



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.

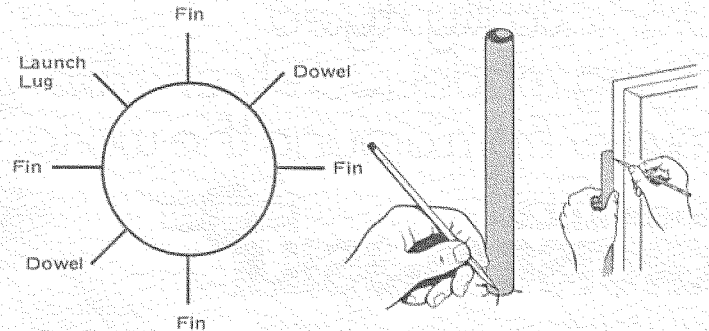
ASSEMBLY INSTRUCTIONS

Place the "Exploded View" plan sheet where you can refer to it while following these assembly instructions. Look it over to get familiar with all the parts.

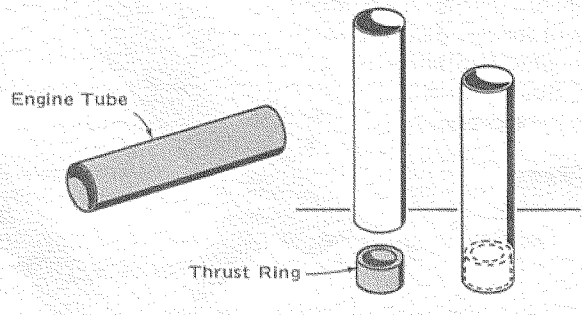
You MUST follow these instructions for satisfactory flights. The shape and placement of the model's parts has been carefully engineered for safe flights. DO NOT try to change the design, "customize" it, or leave off any parts!

- 1 To draw lines for neatly gluing on fins: Stand the body tube on the #8 fin guide below. Mark the fin, dowel, and the launch lug locations with a pencil.

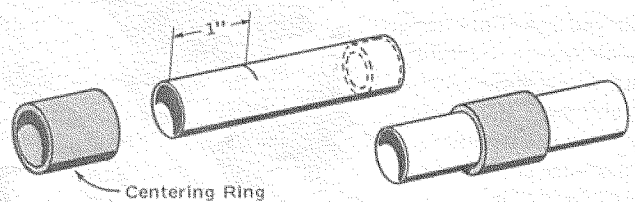
Find a convenient groove or channel, such as a door jamb or partially open drawer. Extend the marks you made on the tube in the above steps the full length of the tube.



- 2 Locate the thrust ring and the engine tube. Place a small amount of glue just inside the opening of one end of the engine tube. Insert the thrust ring so it is flush with the end of the engine tube.

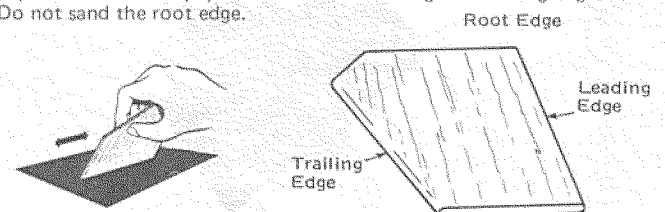


- 3 Locate the large centering ring. Complete assembly of the engine mount by marking the engine tube 1 inch from the end without the thrust ring. Apply white glue to the engine tube above the mark and slide the large centering ring in place so it is even with the mark.

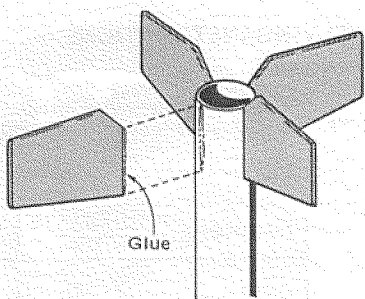


- 4 Carefully push the pre-cut fins from their sheet. Start at one point of the fin and work gently around, using a modeling knife if necessary.

- 5 Square up the fin edges by running them over a piece of fine sandpaper. Use the sandpaper to round the leading and trailing edges. Do not sand the root edge.

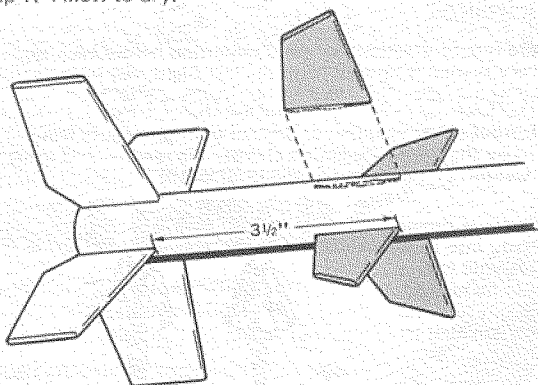


- 6** One at a time, apply a small amount of glue to the root edge of the booster fins. Press the fins in place on the fin location lines. Remove the fins. Wait a few seconds, then place a small amount of glue on the same root edge and place the fin on the fin location line again. Make sure the fin is properly aligned. Hold in place until the fin begins to set up. Repeat for each booster fin. Allow to dry.

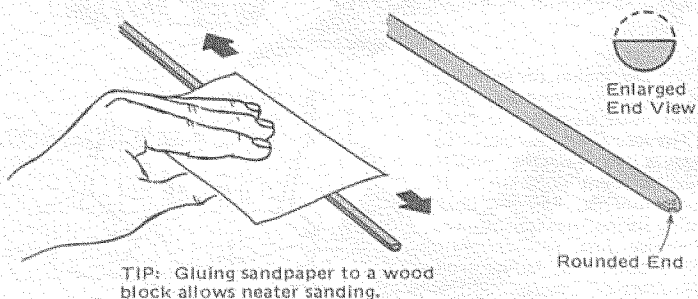


- 7** Assemble the parachute by following the instructions printed on it.

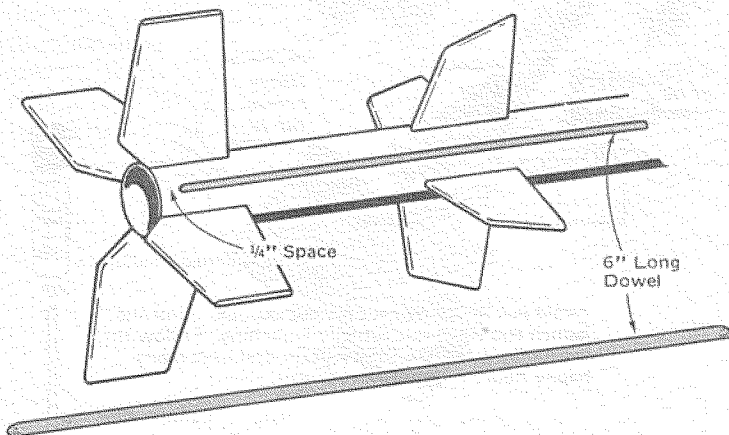
- 8** Measure $3\frac{1}{2}$ inches forward from the front of each booster fin and place a mark on the fin location lines. Glue the four forward fins on the fin location lines so their leading edge touches the marks on the fin location lines. Use the same gluing procedure as you used in step 7. Allow to dry.



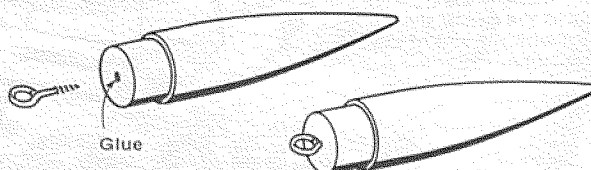
- 9** Cut a 6 inch piece from each of the 9 inch long dowels. In order to make the detail for your rocket, sand one side of each one of these 6 inch long pieces flat. Lay the dowel flat on your work-surface. Pass sandpaper over the dowel, holding it so only one side comes in contact with the sandpaper. Continue this process until the dowel is half-rounded. Also round the ends of each dowel.



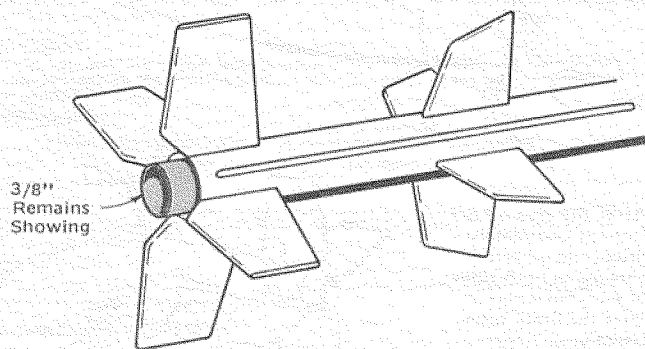
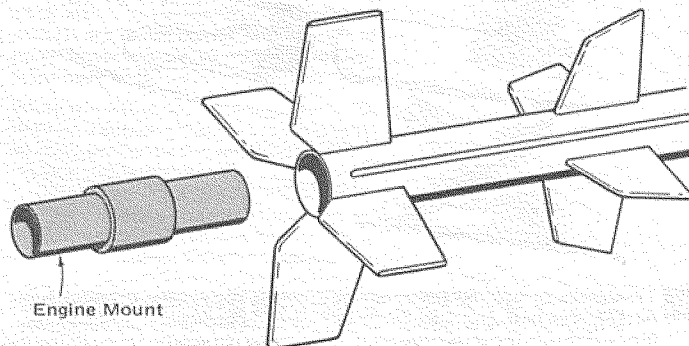
- 10** Place a mark along each dowel location line $\frac{1}{4}$ " from the end of the body tube with the booster fins. Apply glue to the flat bottom of each dowel and glue it to the body along the location lines so that one end of each strip is even with the mark you just made.



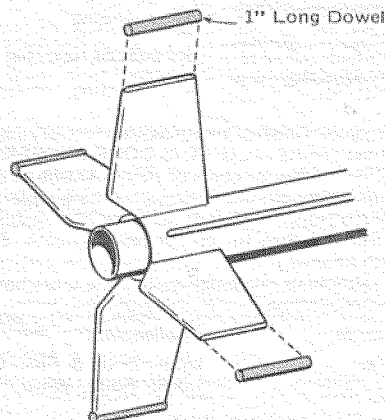
- 11** Carefully turn the screw eye into the center of the nose cone base. Remove the screw eye, and squirt a small amount of glue into the hole. Replace the screw eye.



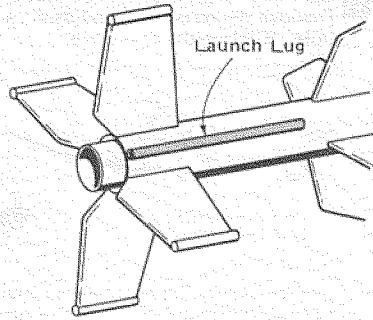
- 12** Run a generous bead of glue around the inside of the rear end of the body tube. Insert the engine mount with the thrust ring forward into the body tube with a smooth turning motion. Do not stop during this procedure as the engine mount may get stuck in the wrong position. Slide the engine mount into the tube until only $\frac{3}{8}$ inch of the engine tube remains below the body tube.



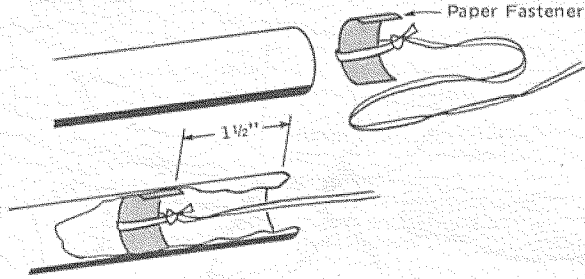
- 13** Carefully cut four one inch lengths from the remaining dowels. To do this, mark the dowel at one inch locations. Place the dowel on a flat surface. Place your modeling knife on the dowel at one of the marks and roll the dowel under the knife with a back and forth motion applying even pressure until you have cut through the dowel. Glue one 1 inch length of dowel to the outside edge of each rear booster fin. Smooth off excess glue and allow to dry.



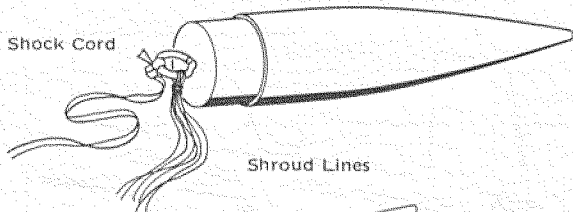
- 14** Place a line of glue along the length of the launch lug. Position the launch lug carefully along the launch lug line so the end of the lug is even with the end of the body tube.



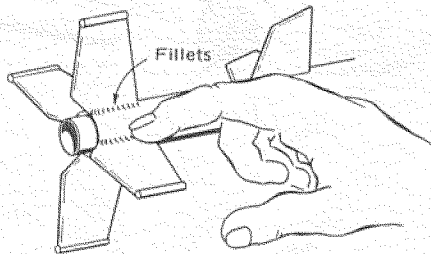
- 15** Tie one end of the shock cord around the heavy paper fastener. Bend it neatly into a half-circle and apply glue to the outside surface. Insert this assembly into the front end of the body tube. Make sure it is at least 1½ inches into the tube. Rub the fastener down firmly with the eraser end of a pencil and hold till dry.



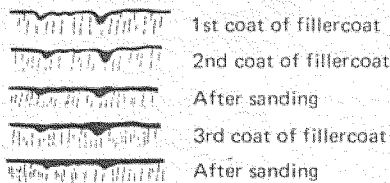
- 16** Tie shock cord to the screw eye in the nose cone using a double knot. Attach the parachute to the shock cord by pushing the shroud line loops through the screw eye and passing the parachute through the loops.



- 17** After the glue on the fins has completely dried, run a bead of glue along both sides of each fin where it joins the body tube. Using your finger, smooth the glue into even fillets. Allow them to dry.



- 18** Paint the fins and basswood strips with balsa fillercoat or sanding sealer and allow to dry. Sand lightly with fine sandpaper. Paint and sand again, repeating the process until all the grain is filled.



- 19** 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, then a finish coat. Let each dry before applying the next. Follow the diagram below for proper paint scheme. For best results, spray first with enamel primer. (You can paint your model in either of two ways: simple or challenging. See the table below and the package for color scheme.)

Simple:	Challenging:
Gray	Upper Body & Fins—Orange Lower Body—White

- 20** When all paint has completely dried, apply the decals according to the instructions printed on the decal backing. See package photo for decal placements.

FLYING INSTRUCTIONS

ENGINES

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

Your Tactical Missile can be launched with the following engines:

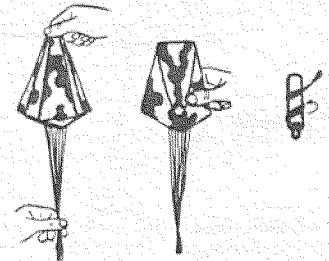
ENGINE	APPROXIMATE ALTITUDE	PURPOSE
½A6-2 A8-5	100–300 feet	LOW ALTITUDE - for first test flight and small fields.
B4-6 B6-6	300–700 feet	MEDIUM ALTITUDES - for general flying and medium sized fields.
C6-7	700–1000 feet	HIGH ALTITUDES - for extremely high altitudes and large launch fields.

FLIGHT PREPPING

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.

Insert flameproof chute wadding to protect your parachute from being melted by the engine's ejection charge. We recommend using 3 sheets of Centuri crepe wadding (#5846/SPW-19).

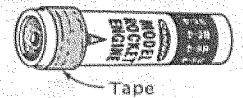
Fold parachutes as shown and tuck neatly into rocket . . . trying to avoid tangles. Chutes should be packed just before flight to avoid them possibly sticking together.



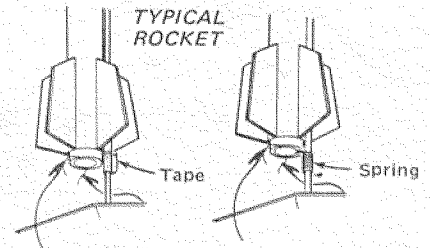
Tuck in shock cord and insert nose cone. The cone should fit snugly, yet be loose enough to eject.

Install igniter into engine, following instructions enclosed with engines.

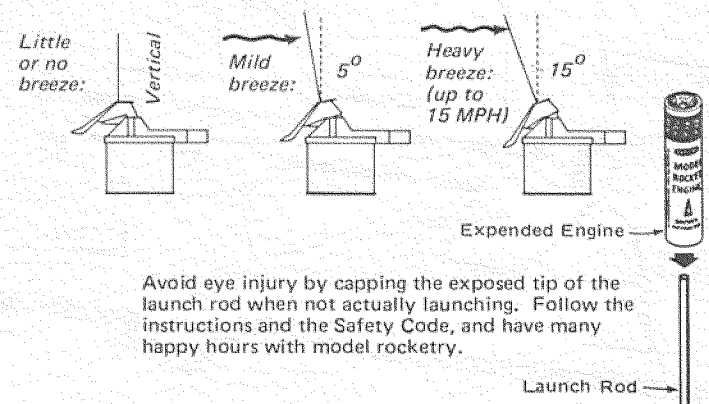
Insert engine into its mount. Wrap masking tape around one end for a tight, secure fit.



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 and the launch lug.



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 Fighter Kit . . . do not tilt the rod to its maximum angle.



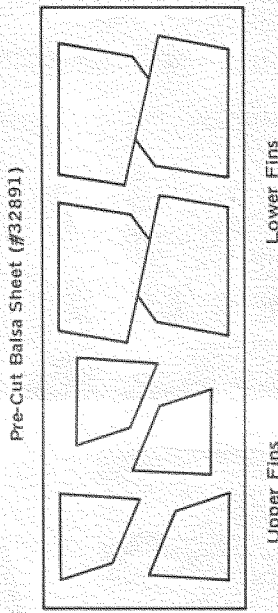
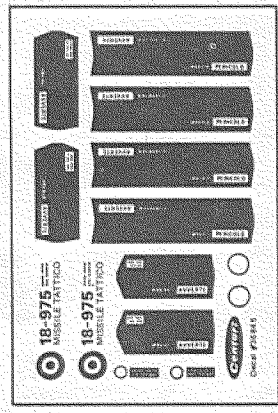
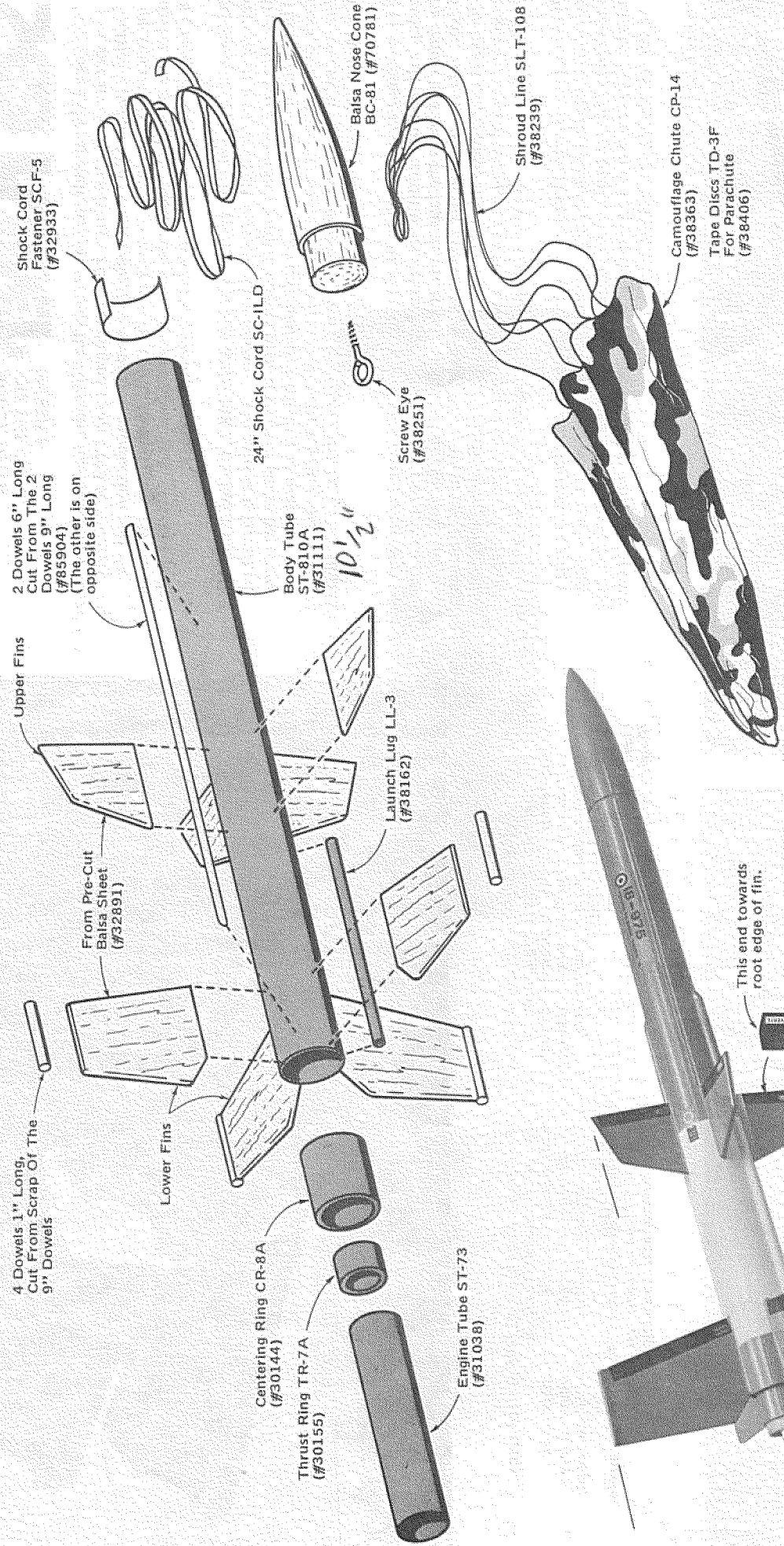
Avoid eye injury by capping the exposed tip of the launch rod when not actually launching. Follow the instructions and the Safety Code, and have many happy hours with model rocketry.

TRANSLATION OF MISSILE MARKINGS
 ITALIAN ENGLISH
 AVVERTE WARNING
 MISSILE TATTICO TACTICAL MISSILE
 PERICOLO DANGER

Centuri Exploded View

Italian SEA KILLER (Side 2 of 81611)

Special acknowledgment and thanks to Sistel-Sistemi Elettronici S.P.A. of Italy, and the Italian Embassy in Washington, DC for their help on the Centuri Sea Killer project.



Upper Fins Lower Fins



Data Sheet

ITALIAN

Sea Killer

SCALE DATA
ON THE REAL
MISSILE

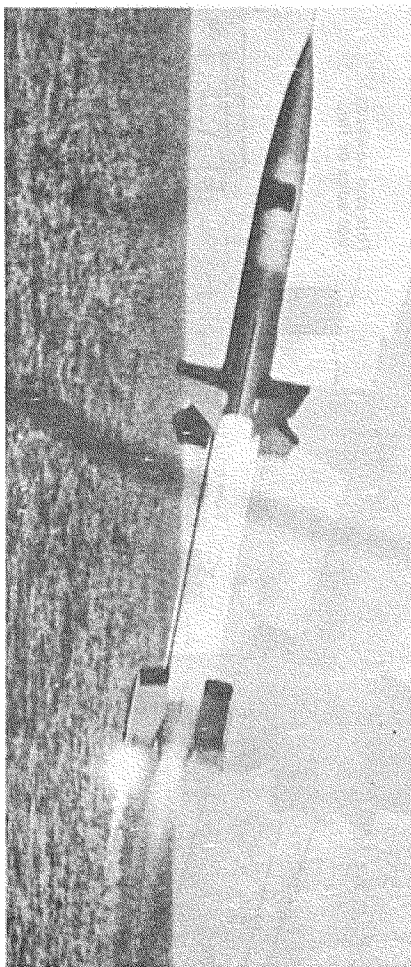
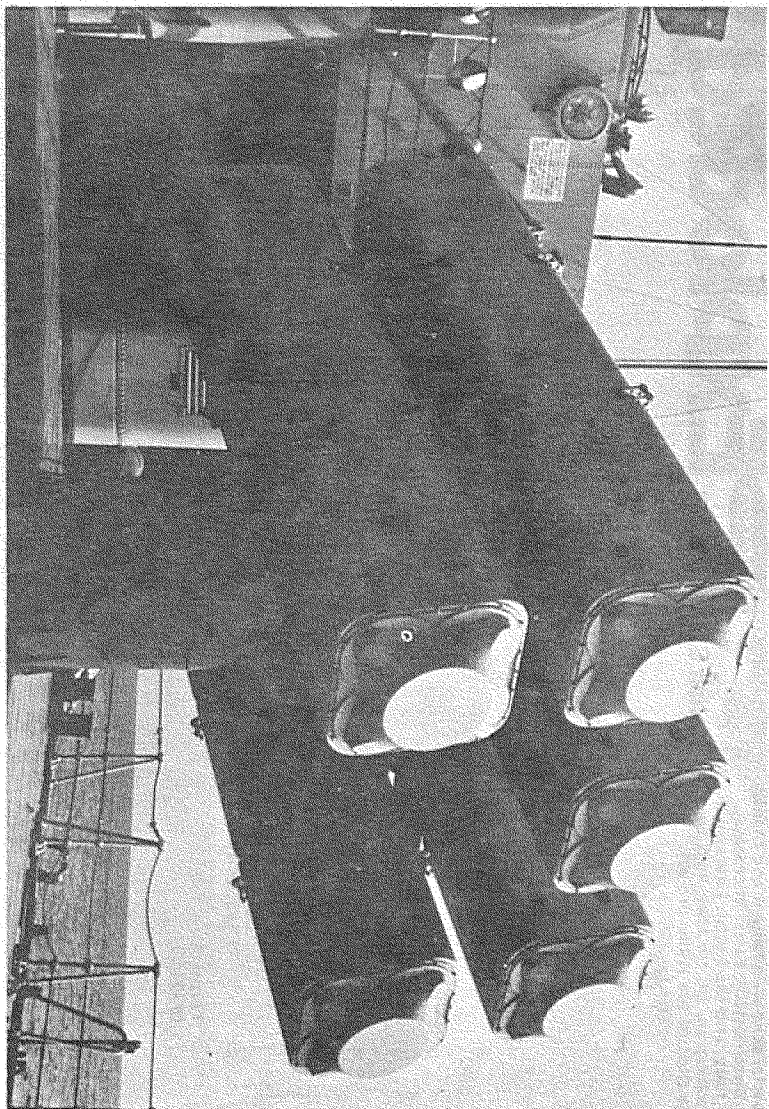
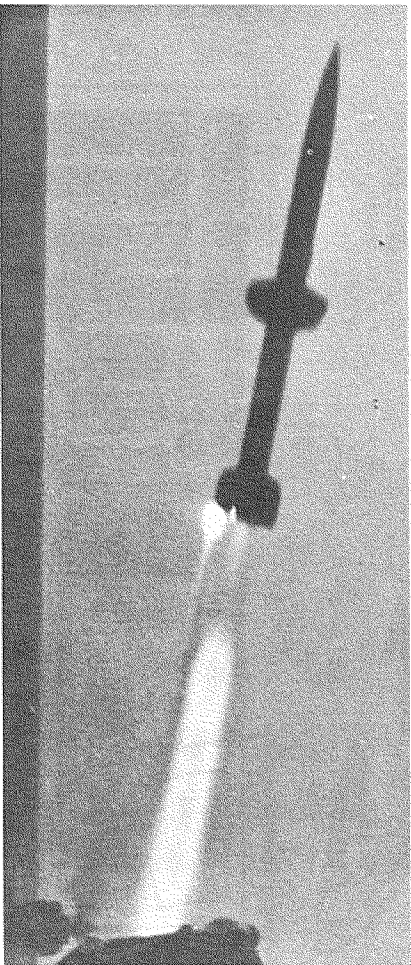
Italy's Sea Killer missile, also known as the Nettuno, has seen many years of service in the Italian Navy. First developed from 1963 to 1966 by Contraves Italian SpA, the missile then went into production and the first operational installation was made in 1969. In that year, responsibility for the missile changed from Contraves to Sistel SpA. The Sea Killer is currently deployed on many ships of the Italian Navy.

Along with its larger companion, the Sea Killer MK2, the Sea Killer MK1 represents a potent surface-to-surface weapon. The missile is launched from ships against other surface targets such as ships or shore batteries. The launcher is a complex, five-unit launcher which is mounted on the deck of the ship. It can be swiveled in any direction, giving the ability to fire on any target in any position. The missiles can also be launched from the Marte helicopter-launched missile system.

The guidance system used in the Sea Killer is of the beam-riding type along with altitude control via a missile-borne radio altimeter which can be controlled from the launch site to adjust the altitude of the missile in flight. The missile also has provisions for radio control guidance should the beam riding mechanism not function due to interference. The missile is guided toward its target at very low altitudes and at high speed, making it difficult to spot with radar and nearly impossible to shoot down.

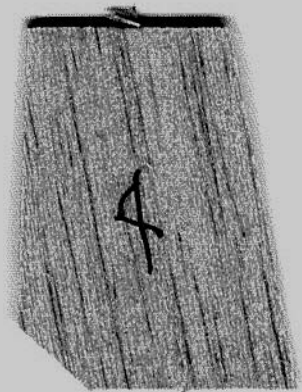
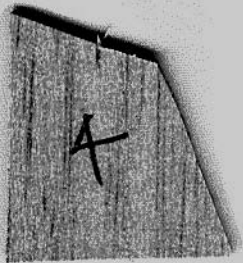
With a range of over 10km and a warhead of 35kg of fragmentary high explosive, the Sea Killer is a weapon system to be reckoned with. Italy has deployed it on many of its ships, including their fast patrol boat, the Saetta. The Sea Killer represents a part of the NATO arsenal, so important for the security of western Europe.

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Type: Shipborne surface-to-surface. Also used in Marte air-launched anti-ship system.
Configuration: Slender cylindrical body with pointed nose. Cruciform wings at mid-length and rectangular cruciform tail surfaces.
Length: 12 ft 3 in (3.73m)
Diameter: 8 in (20.6cm)
Span (Max): 2ft 9½ in (85.7cm)
Weight: 375 lb (170kg)

Propulsion: Solid 4,410 (2,000kg) static thrust
Range: 6.2 miles (10km) plus
Guidance: Beam-riding/radio command/radio altimeter, with optical/radio command rever-sionary mode for use under interference conditions.
Warhead: High-explosive, 77 lb (35kg), fragmentation with impact/proximity fuse.
Main Contractor(s): Sistel SpA





18-975 MISSILE TATTICO



18-975 MISSILE TATTICO



SPR. CAS. 111
REG. 11111



SPR. CAS. 111
REG. 11111



Decal #36845

