ESTES INDUSTRIES
1295 H Street
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BETA LAUNCH VEHICLE™

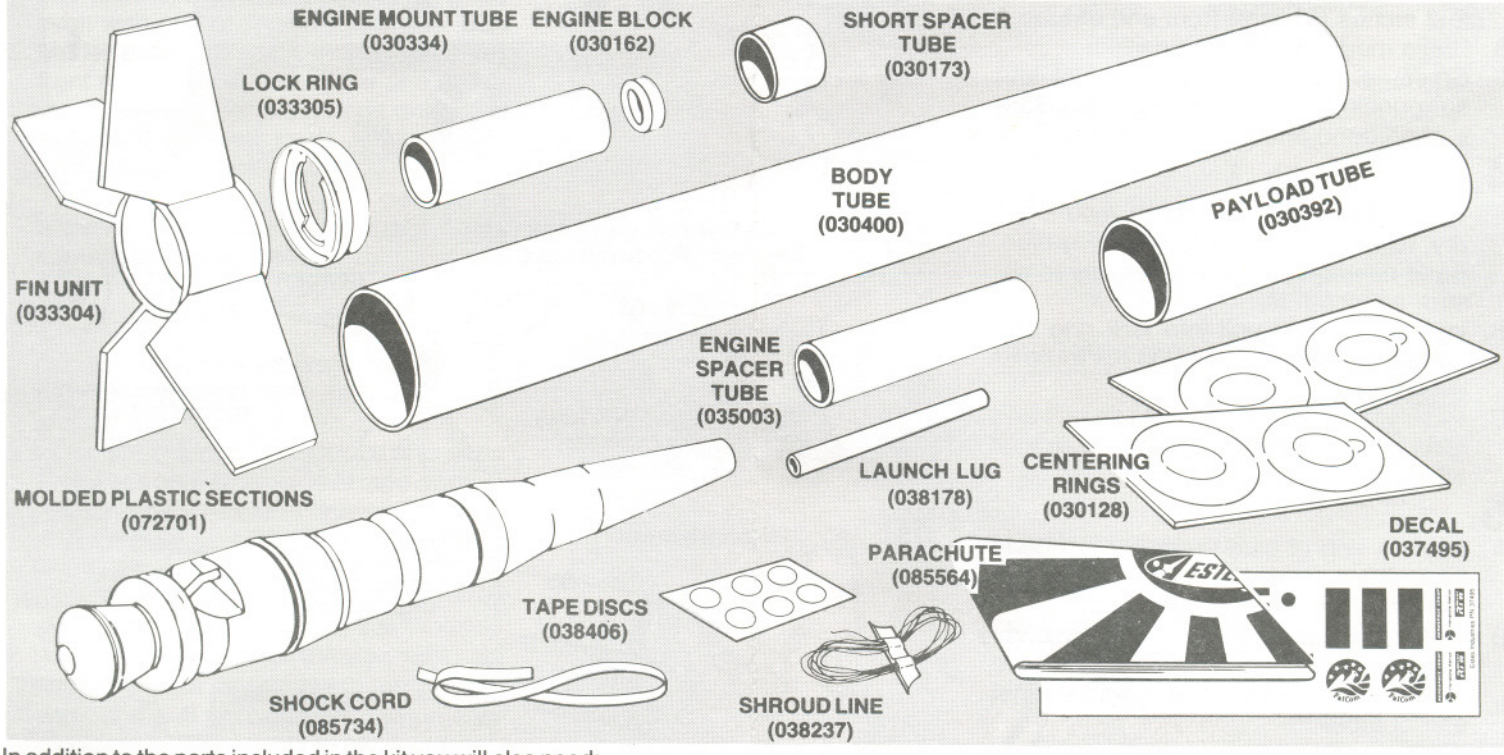
FLYING MODEL ROCKET #2054

ASSEMBLY TIP

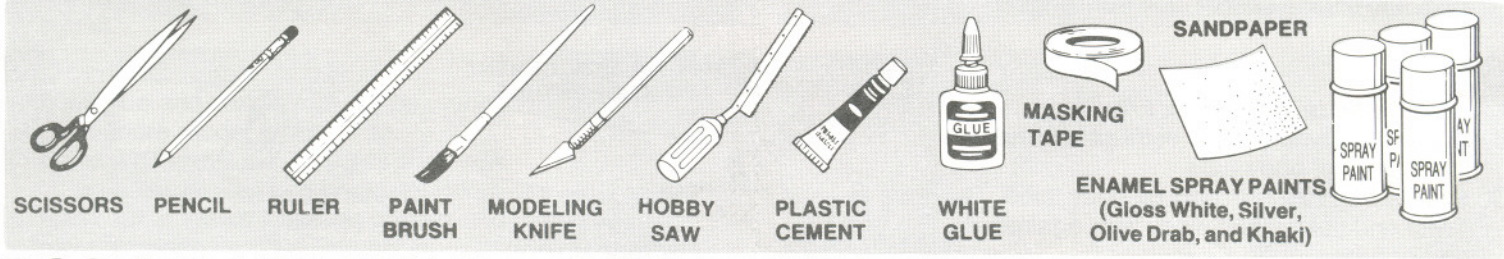
Read all instructions before beginning work on your model. Make sure you have all parts and supplies. Test-fit all parts together before applying any glue. If any parts don't fit properly, sand as required for precision assembly.

PARTS AND SUPPLIES

Locate the parts shown below and lay them out on the table in front of you.



In addition to the parts included in the kit you will also need:



ROCKET ASSEMBLY

1.

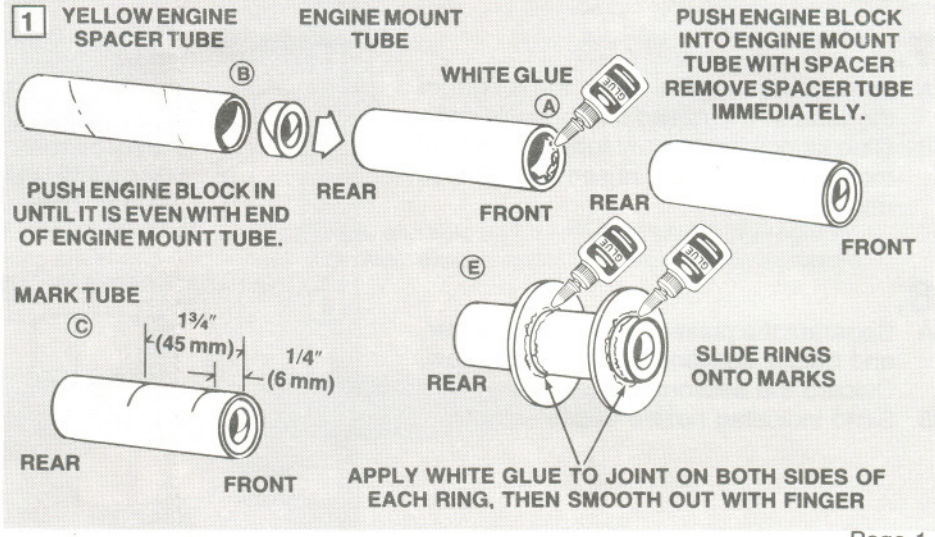
A. Apply glue to inside of one end of engine mount tube.

B. Insert engine block into opposite end of tube and push engine block up even with end of tube. Use yellow engine spacer tube to do this. Immediately remove spacer tube before glue sets.

C. Mark engine mount tube 1/4 inch (6 mm) and 1¾ inches (45 mm) from engine block end of tube.

D. Remove centering rings from one die-cut card.

E. Slide rings onto tube, one at each mark. Apply glue to both sides of each ring. Set assembly aside to dry.



2.

A. Cut shock cord mount from instructions.
B. Crease on dotted lines by folding. Spread glue on section 2 and lay end of shock cord into glue. Fold over and apply glue to section 3. Lay shock cord as shown and fold mount over again.
C. Clamp unit together with fingers until glue sets.

3.

A. Apply glue to shock cord mount. Position shock cord mount as shown. Gently position mount no less than 1 inch (25 mm) to 2 inches (51 mm) from end of tube.
B. Press mount firmly into position.
C. Smear a film of glue over mount and surrounding area of body tube to insure a good bond and smooth surface.

4.

A. When glue joints on engine mount are dry, test-fit engine mount into body tube. Sand centering rings if necessary to assure a smooth fit.
B. Insert plastic fin unit into lock ring and turn to lock it into place. Do not force or overtighten.
C. Push yellow spacer tube into fin unit and slide engine mount onto engine spacer tube.

5.

A. Apply a ring of glue inside rear of body tube about 1 inch (25 mm) to 1½ inches (38 mm) from end of tube.
B. Slide engine mount and fin unit into body tube with one smooth motion until fin unit/lock ring is inside of tube and tight against end of tube.
C. After glue has set, remove fin unit, lock ring, and engine spacer tube from engine mount.

6.

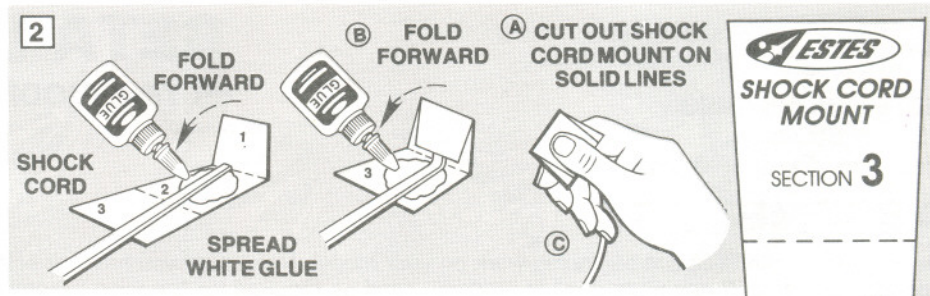
A. Remove fin unit from lock ring.
B. Apply tube-type plastic cement around inside rear of body tube.
C. Slide lock ring into end of body tube. Twist and push it into place tight against end of tube.

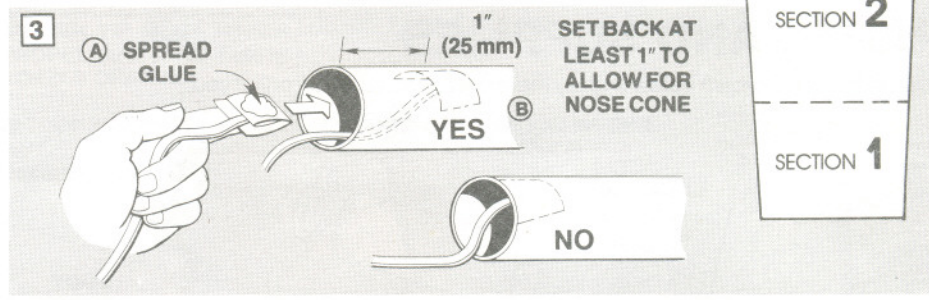
7.

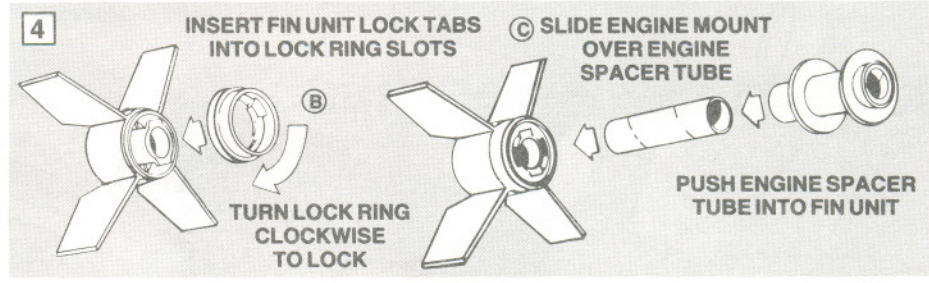
A. Draw a straight line down the length of the tube at the raised line on lock ring.
B. Glue launch lug to body tube on line 3⅝" inches(92 mm) from raised line on lock ring.

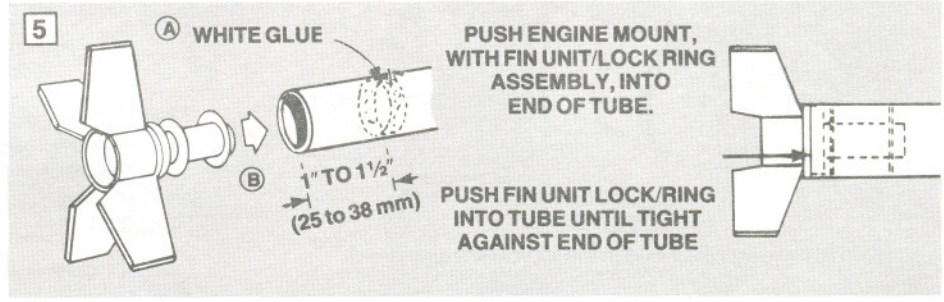
8.

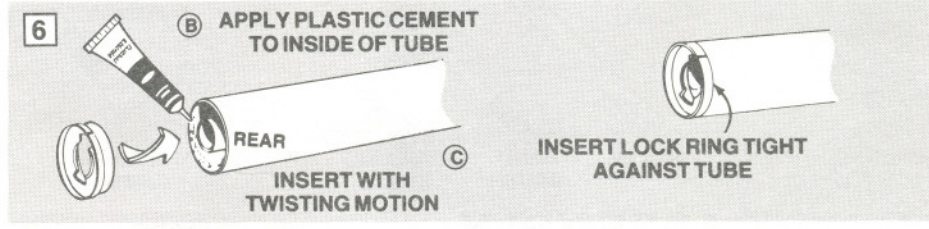
A. Separate the plastic nose cone, adapter, and nozzle sections using a hobby saw. Discard the sections indicated.
B. Sand indicated nozzle edges smooth.

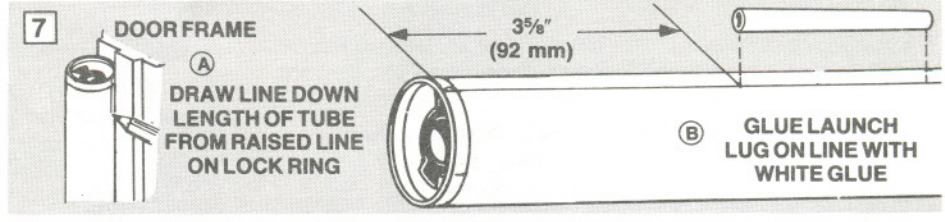


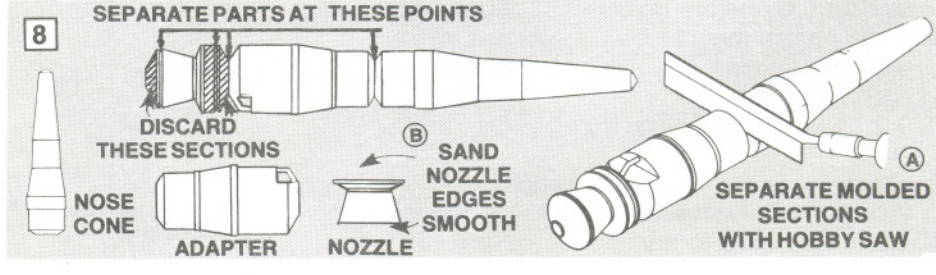






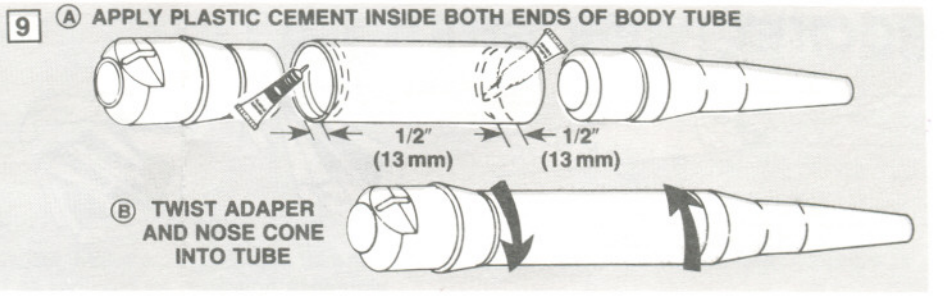






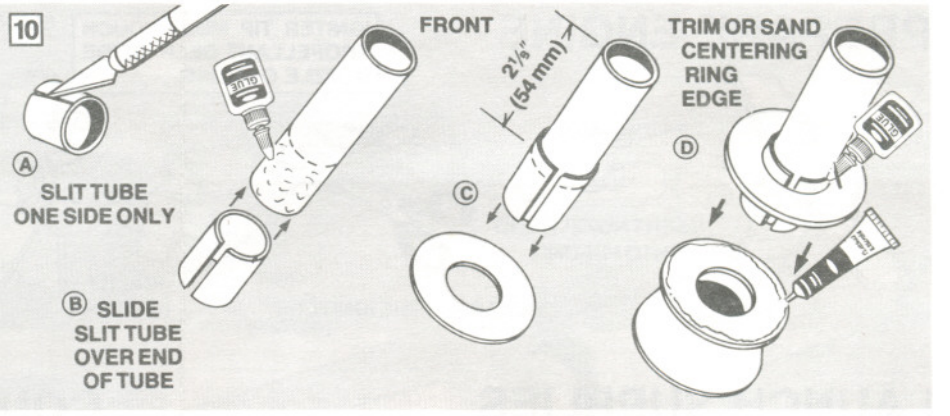
9.

A. Apply plastic cement around the inside of both ends of the remaining body tube.
B. Insert plastic nose cone and adapter sections into tube with a twisting motion.



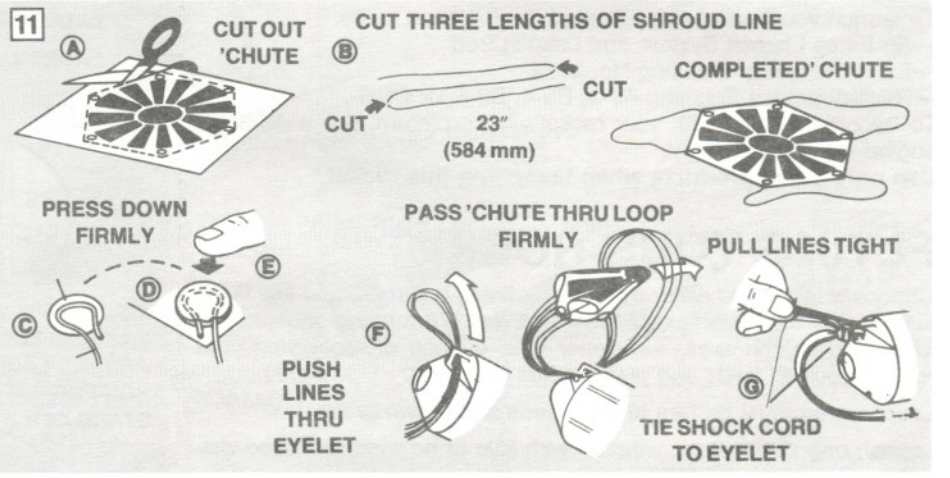
10.

A. Slit short spacer tube as shown.
B. Apply glue to yellow engine spacer tube, and slide slit tube over end onto glue, even with end of spacer tube.
C. Mark spacer tube 2⅛ inches (54 mm) front of tube as shown. Slide one of the remaining two centering rings onto tube to the 2⅛ (54 mm) mark. Apply glue to both sides of ring/tube joint.
D. Trim centering ring edge if needed to allow ring to fit inside lip of nozzle. Apply cement to lip of nozzle and push ring into place.



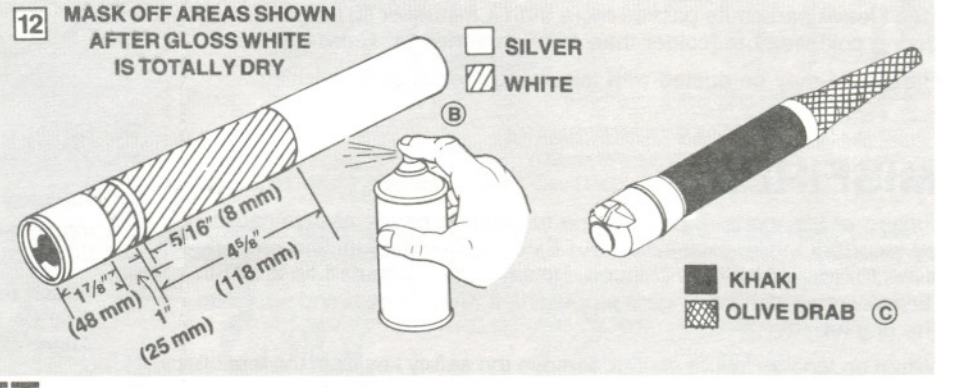
11.

A. Cut out parachute on edge lines.
B. Cut three 23 inch (584 mm) lengths of shroud line.
C. Form small loops with shroud line ends and press onto sticky side of tape discs.
D. Attach tape discs with line ends to top of parachute as shown.
E. Firmly press tape discs into place until both tape discs and parachute material are molded around shroud line loops.
F. Pass shroud line loops through eyelet on adapter. Pass parachute through loop ends and pull lines against the adapter eyelet.
G. Tie free end of shock cord to adapter eyelet.



12.

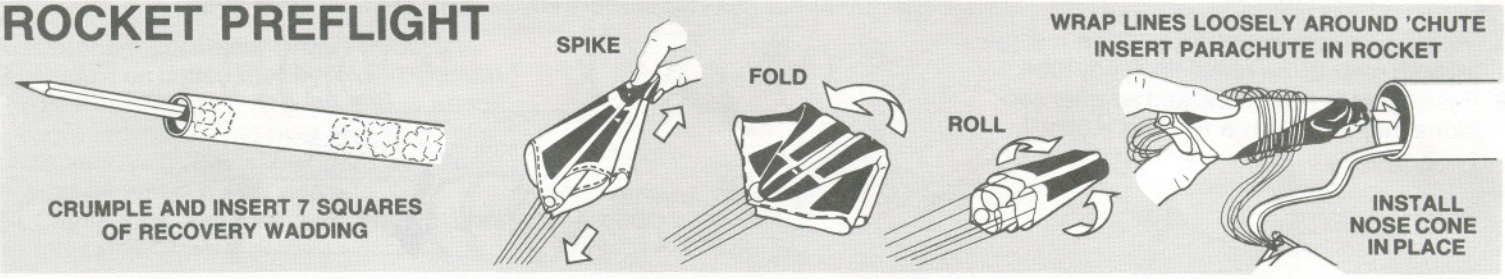
A. After glue and cement are dry on model, paint entire model gloss white.
B. When white paint is thoroughly dry, mask off areas shown and paint model silver.
C. Mask off nose sections as shown and paint accordingly.
D. Follow instructions on spray can for best results.



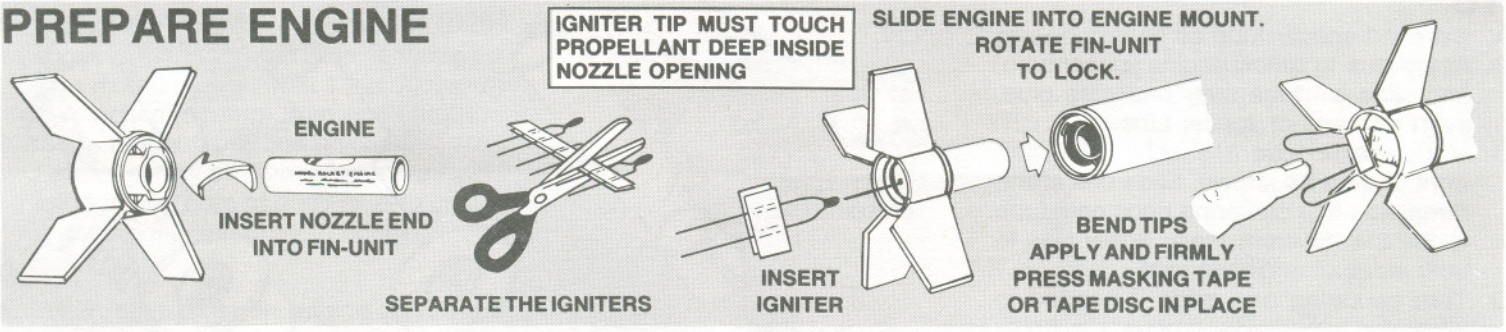
FINISHING YOUR ROCKET

Apply decals in positions shown. Cut each decal out, dip in lukewarm water for 20 seconds, and hold until it uncurls. Refer to photograph and panel front for decal placement. Slip decal off backing sheet and onto model. Blot away excess water. For best results, let decals dry and apply a coat of clear spray paint overnight to protect decals.

ROCKET PREFLIGHT



PREPARE ENGINE



LAUNCH SUPPLIES

To launch your rocket you will need the following items:
—An Estes Launch System and Launch Pad
—Estes Recovery Wadding No. 2274
—Recommended Engines: A8-3, B6-4, B8-5, or C6-5
To become familiar with your rocket's flight pattern, use a A8-3 engine for your first flight.
Use only Estes products when launching this rocket.

FLYING YOUR ROCKET

Choose a large field away from power lines, tall trees, and low flying aircraft. Try to find a field at least 250 feet (76 meters) square. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great.

Launch area must be free of dry weeds and brown grass.

Launch only during calm weather with little or no wind and good visibility.

Don't leave parachute packed more than a minute or so before launch during cold weather [colder than 40° Fahrenheit (4° Celsius)].

Parachute may be dusted with talcum powder to avoid sticking.

MISFIRES

Failure of the model rocket engine to ignite is nearly always caused by incorrect igniter installation. An Estes igniter will function properly even if the coated tip is chipped. However, if the coated tip is not in direct contact with the engine propellant, it will only heat and not ignite the engine.

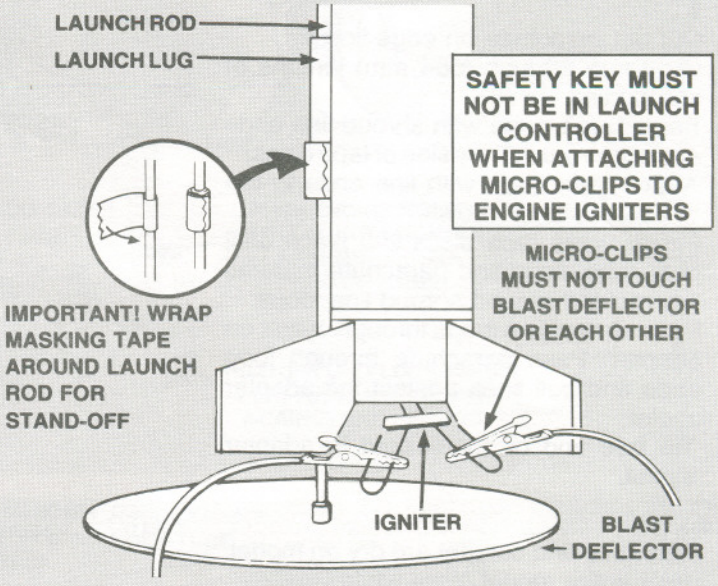
When an ignition failure occurs, remove the safety key from the launch control system, and wait one minute before approaching the rocket. Remove the expended igniter from the engine and install a new one. Be certain the coated tip is in direct contact with the engine propellant, then tape the igniter leads firmly to base of engine as illustrated above. Repeat the countdown and launch procedure.

FOR YOUR SAFETY AND ENJOYMENT

Always follow the NAR-HIA* MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.

*National Association of Rocketry-The Hobby Industry of America

COUNTDOWN AND LAUNCH



⑩ BE CERTAIN SAFETY KEY IS NOT IN LAUNCH CONTROLLER.

⑨ Remove safety cap and slide launch lug over launch rod to place rocket on launch pad. Make sure the rocket slides freely on the launch rod.

⑧ Attach micro-clips to the igniter wires. Arrange the clips so they do not touch each other or the metal blast deflector. Attach clips as close to protective tape on igniter as possible.

⑦ Move back from your rocket as far as launch wire will permit (at least 15 feet - 5 meters).

⑥ INSERT SAFETY KEY to arm the launch controller.

Give audible countdown 5...4...3...2...1

LAUNCH!! **PUSH AND HOLD LAUNCH BUTTON UNTIL ENGINE IGNITES**

REMOVE SAFETY KEY FROM LAUNCH CONTROLLER. REPLACE SAFETY KEY AND SAFETY CAP ON LAUNCH ROD.

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