ESTES

E2X

ES

Hijax™

FLYING MODEL ROCKET

CARRIES YOUR PAYLOADS INTO SPACE!

ALMOST READY TO FLY

- FAST, EASY BUILD
- NO PAINTING
- LARGE PAYLOAD CAPSULE
- LAUNCHES OVER & OVER
- HIGH-ALTITUDE PERFORMANCE

Recommended for ages 10 and up with adult supervision for those under 12.

EST 2105

ESTES

Hijax™

FLYING MODEL ROCKET

CARRIES YOUR PAYLOADS INTO SPACE!

ALMOST READY TO FLY

- QUALITY PLASTIC PARTS
- WILD GRAPHICS
- SELF-STICK DECALS
- EASY FLIGHT PREPARATION
- COLLECT THEM ALL!

ALL PARTS INCLUDED TO BUILD YOUR E2X® FLYING MODEL ROCKET

Length: 50.8 cm (20 in.)
Diameter: 27.68 mm (1.09 in.)
Weight: 57 g (2 oz.)
Recommended Engines:
A8-3 (First Flight), B4-4, B6-4, B8-5, C5-3, C6-3, or C6-5

This model kit requires assembly. Requires tube-type plastic cement, engines, igniters, wadding, and launch system -- NOT INCLUDED.

1 MODELE REDUIT PEINTURE ET COLLE NON COMPRISES

USE ONLY WITH ESTES PRODUCTS

MADE IN U.S.A.
PATENT NO. 5,267,885

RCHTA

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DER RAINE PUNKT

ESTES

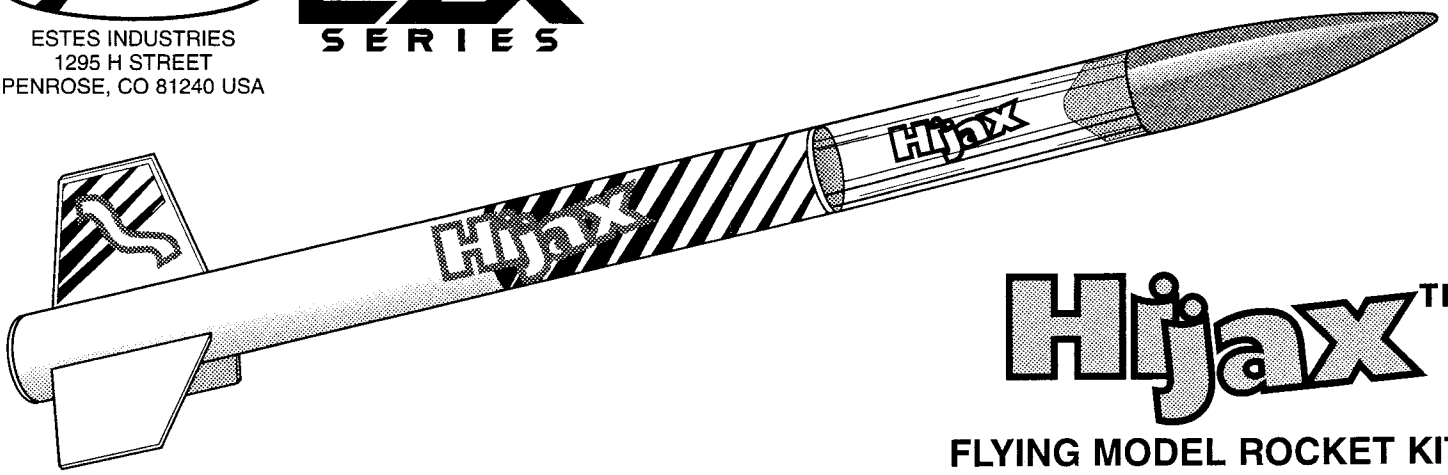
ESTES INDUSTRIES
1295 H STREET
PENROSE, CO 81240

EST 2105

PN 36211

ESTES INDUSTRIES
1295 H STREET
PENROSE, CO 81240 USA

E2X SERIES



Hijax™

FLYING MODEL ROCKET KIT
EST 2105

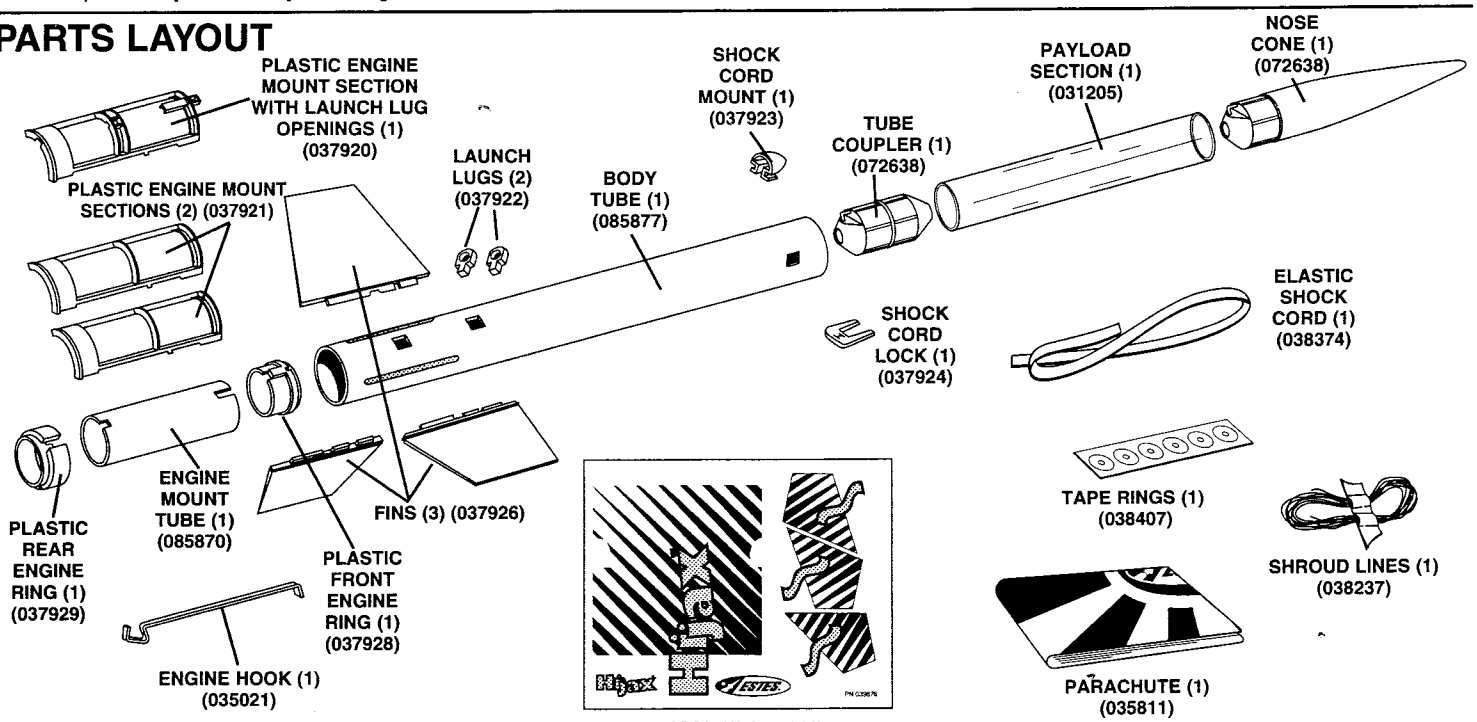
HOW TO USE THESE INSTRUCTIONS:
READ ALL INSTRUCTIONS BEFORE STARTING WORK ON THIS MODEL.

A. This rocket, incorporating basic model rocketry construction techniques, will help you in the development of your rocketry modeling skills.

B. Test fit parts before applying any glue. Trim parts as necessary for proper fit.

C. The construction supplies required for each step are listed at the beginning of each step.

PARTS LAYOUT



EXTREMELY IMPORTANT: THE PARTS LAYOUT IS FOR REFERENCE ONLY!

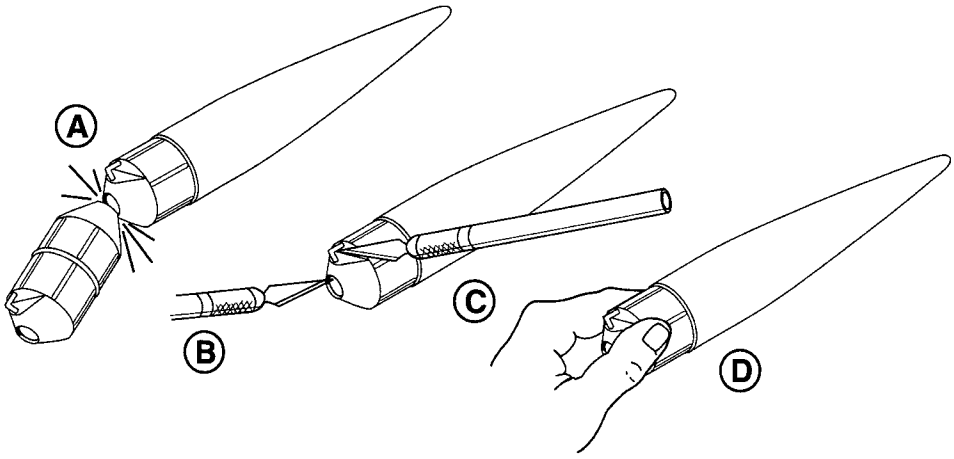
The parts layout is only intended to assist you in locating the parts included in this kit.

CONSTRUCTION SUPPLIES

In addition to the parts included in your kit, you will need these construction supplies. Each step shows which supplies will be required.

ROCKET ASSEMBLY

1. NOSE CONE PREPARATION



A. ☐ Snap the tube coupler and nose cone apart as shown. Save coupler for payload section assembly.

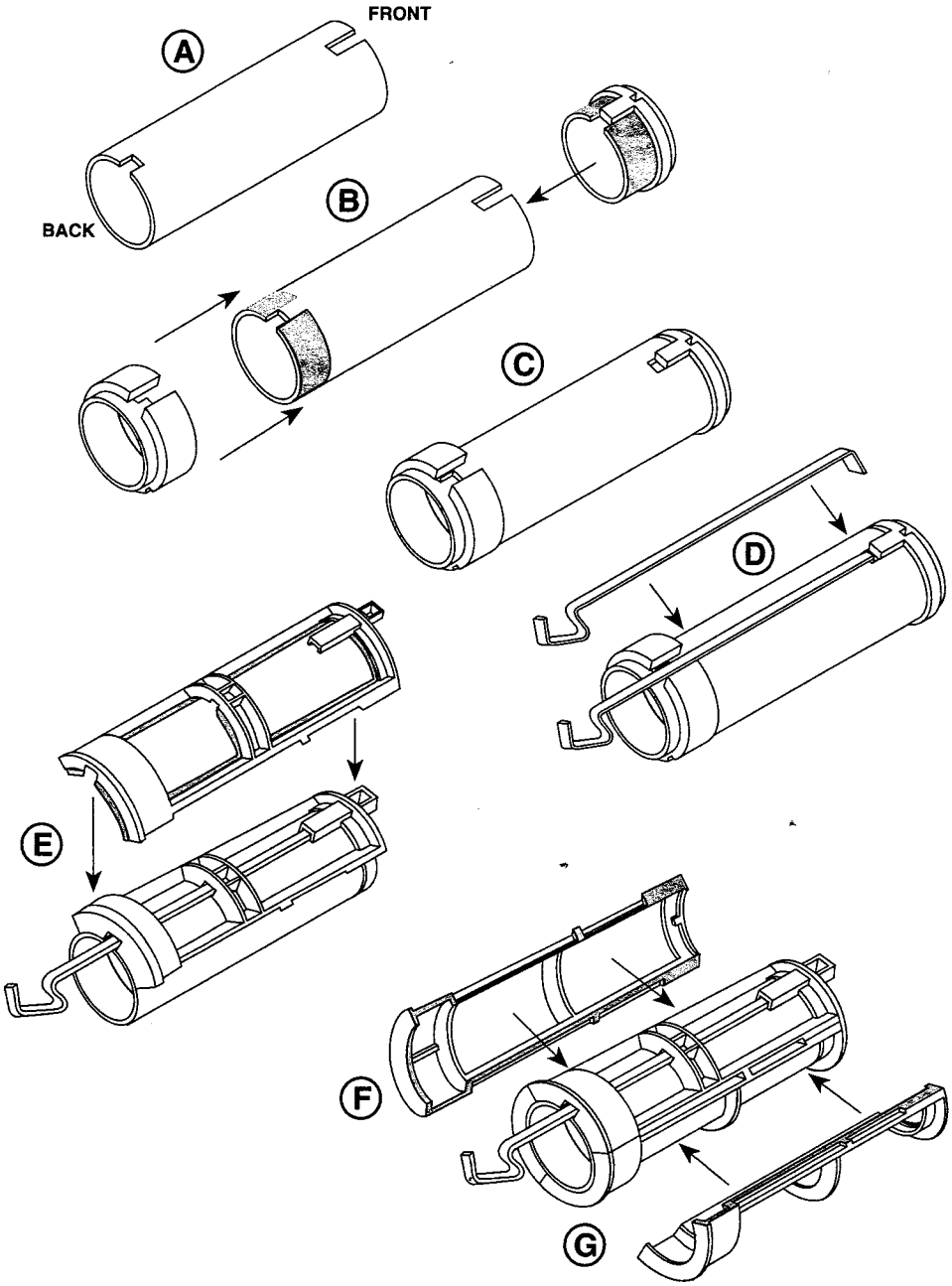
B. ☐ Clean off excess plastic

C. ☐ The hole in plastic loop may have to be cleaned out with a hobby knife.

D. ☐ Set nose cone and coupler aside until step 5.

2. ENGINE MOUNT ASSEMBLY

NOTE: For this step you will need: front and rear engine mount rings, three engine mount sections, engine mount tube and engine hook. **Do not use glue yet!** Read each step, test fit all parts together first without gluing. Trim off any excess plastic to ensure proper fit.



A. ☐ Notice the engine mount tube has a notch on both ends. Position the longer notch to the front.

B. ☐ The front engine ring fits into the end of the mount tube, the rear engine ring fits over the end of the tube.

C. ☐ Using the notches for guides, position the front and rear engine rings on the engine mount tube. Check for proper fit.

D. ☐ Position engine hook as shown with front of hook through opening between front engine ring and engine tube notch. The hook should extend through the split rear ring and beyond the rear of the engine tube.

E. ☐ Locate the plastic engine mount section with engine hook notches and launch lug openings. Position this section directly over engine hook on engine mount. Rotate it slightly until it locks into place. Hook should move up and down in slot at rear.

F. ☐ Test fit the remaining two sections, be sure they lock into position.

G. ☐ The illustration shows the complete engine mount assembly.

H. ☐ Now disassemble and work through steps A through G again, this time applying glue to the areas in red.

I. ☐ Complete engine mount. Let dry for ten minutes before installing. This is a good time to build your parachute, step 6.

3. ENGINE MOUNT FIN/LAUNCH LUG INSTALLATION

Do not use glue yet! Read each step, test fit all parts together first without gluing.

A. ☐ Locate the body tube. Notice the tube has three long slots and squares punched out. The slots are located at the rear of the body tube.

B. ☐ Orient the engine mount as shown. Hold the engine hook in your fingers and gently push into the rear of the body tube.

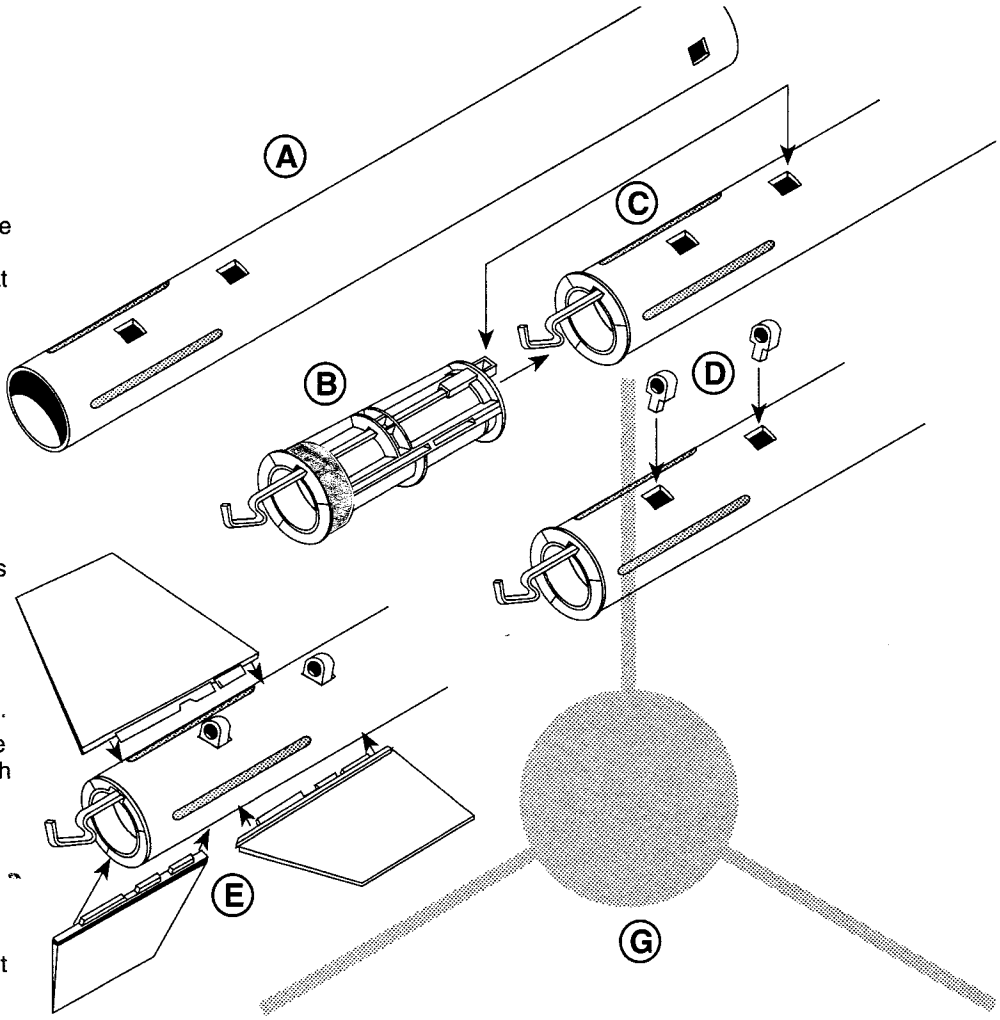
C. ☐ Check for proper alignment of all three fin slots and launch lug openings.

D. ☐ Test fit the two launch lugs into the openings as shown. Make sure holes in launch lugs go the same direction as the body tube.

E. ☐ Test fit fins into slots. Make sure fins rest against body tube side with no gaps. Fins will fit loosely at this point.

F. ☐ Remove fins, launch lugs and engine mount. Work through steps B through E again, this time applying glue to areas in red. Put back together in proper alignment. Gluing on the engine mount is optional.

G. ☐ NOTE: After gluing, check alignment on all three fin slots and launch lug openings using shade pattern at right before allowing glue to set. Allow to dry for ten minutes.



4. SHOCK CORD MOUNT ATTACHMENT

A. ☐ Locate the shock cord mount, mount lock and elastic cord. Trim excess plastic from parts for proper fit.

B. ☐ Insert mount into square opening in front of body tube, making sure that rounded end of mount faces forward.

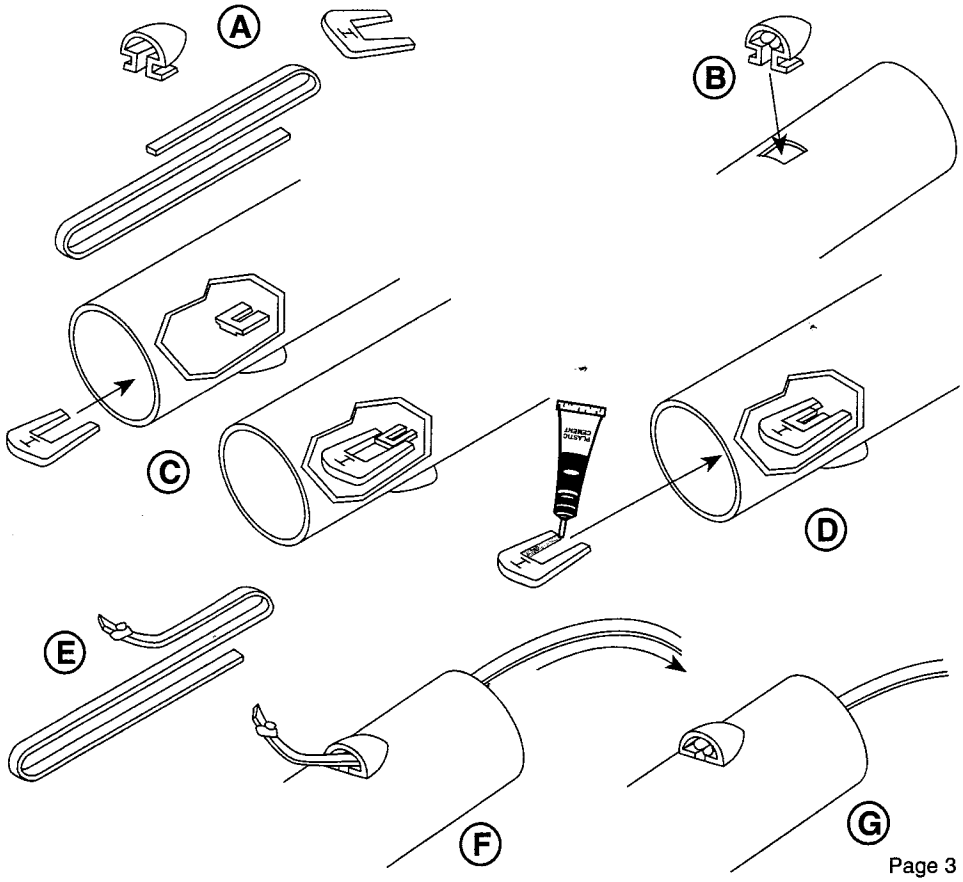
C. ☐ Locate the shock cord mount lock. The lock has the letter "I" molded in the plastic. Face the letter "I" toward the center of the tube. Test fit the lock by sliding it partially under edges of mount.

D. ☐ Remove lock, apply cement as shown and slide it all the way under the mount.
IMPORTANT: Allow glue to dry for ten minutes before proceeding to next step. Getting glue on the elastic shock cord will weaken the material which could lead to shock cord failure during flight.

E. ☐ Tie double knot in one end of the shock cord.

F. ☐ Thread the other end of shock cord into mount from outside of tube. Feed cord through front end of body tube.

G. ☐ Pull cord firmly and secure knot inside shock cord mount as shown.



5. PAYLOAD OR BODY EXTENSION ASSEMBLY

NOTE: The forward section of your rocket can be used to carry objects aloft. If you want to launch experiments in your rocket, do not glue nose cone into payload section.

A. ☐ Locate the tube coupler from step 1.

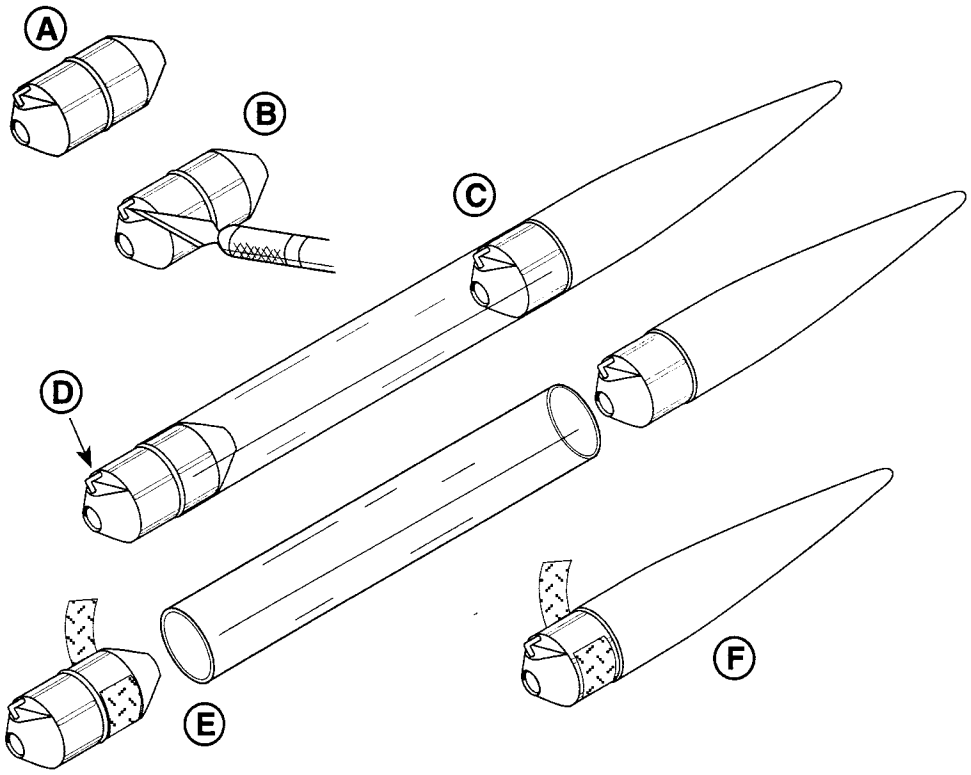
B. ☐ Clean off excess plastic. The plastic loop may have to be cleaned out with a hobby knife.

C. ☐ Test fit the nose cone and tube coupler into payload section.

D. ☐ CAUTION: Make sure loop on tube coupler is on the outside when assembled.

E. ☐ Remove coupler. Use a piece of tape to shim the shoulder for a tighter fit, and put back together.

F. ☐ If the nose cone fits loosely, you may lose your payload. Use a piece of tape to shim the shoulder for tighter fit.



6. RECOVERY DEVICE ASSEMBLY

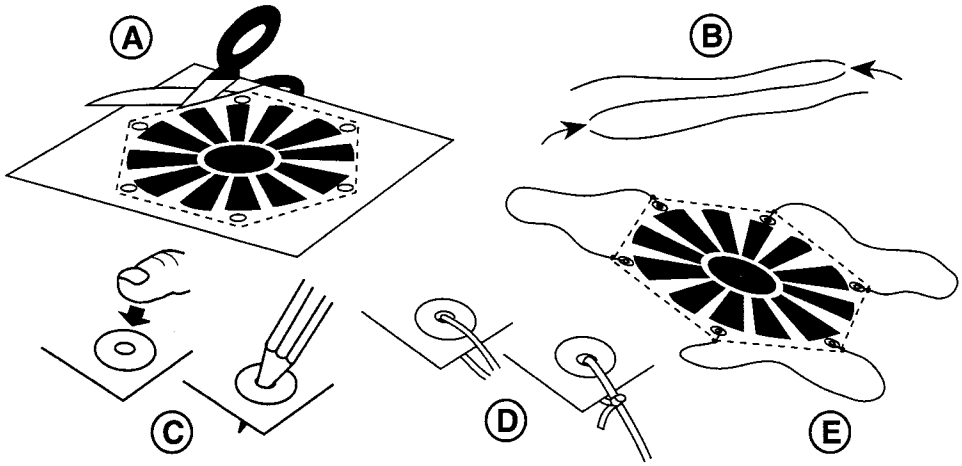
A. ☐ Cut out parachute on printed edge lines.

B. ☐ Remove tape from shroud lines, fold and cut into three equal lengths.

C. ☐ Attach tape rings to top of parachute and press firmly into place. Punch hole through the parachute material with the point of a sharp pencil. (Do not use a dull pencil or ballpoint pen).

D. ☐ Pass shroud line through hole in parachute and tape ring. Tie lines together with a double knot.

E. ☐ Attach remaining lines to other corners to complete parachute.

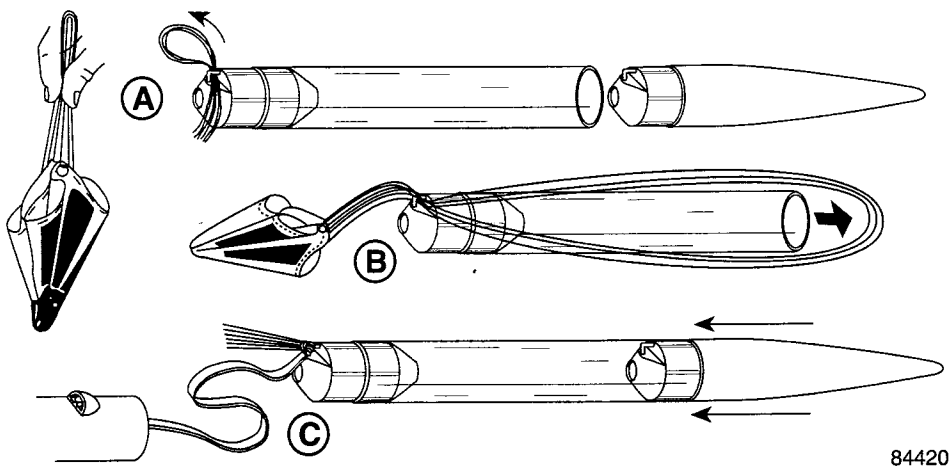


7. RECOVERY DEVICE AND SHOCK CORD ATTACHMENT

A. ☐ Remove nose cone. Gather shroud lines to form a loop. Thread shroud lines through loop on coupler.

B. ☐ Pass tip of payload section back through loop of shroud lines as shown. Pull lines tight.

C. ☐ Tie free end of shock cord to loop on coupler. Use a double knot. Replace nose cone.



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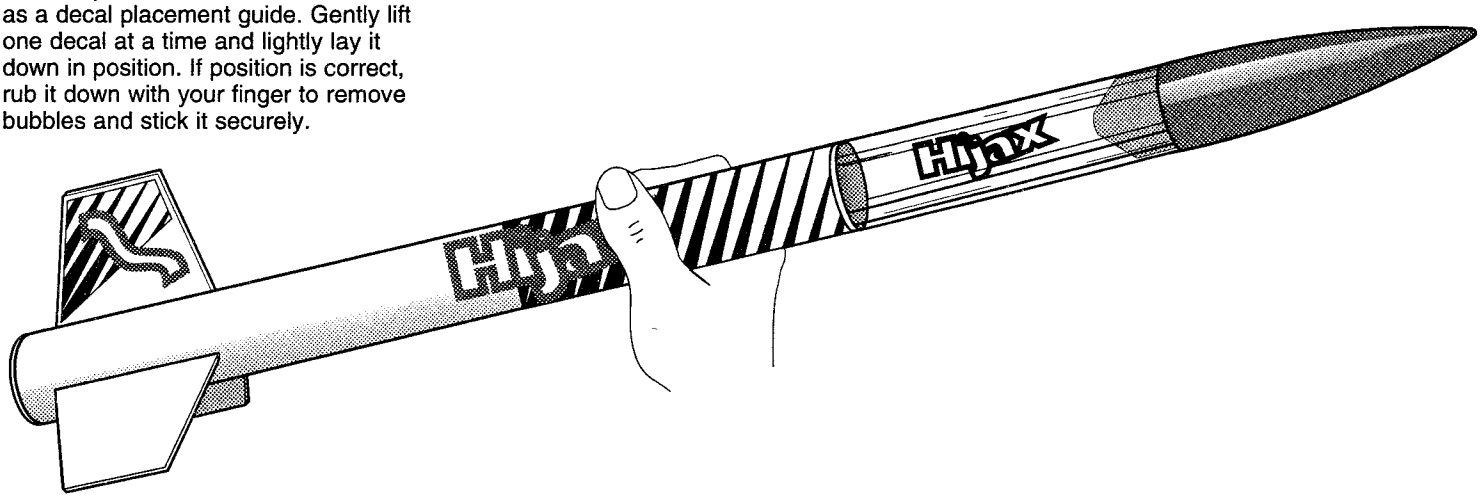
8. FINISHING YOUR ROCKET

Use the photo on the front of the box as a decal placement guide. Gently lift one decal at a time and lightly lay it down in position. If position is correct, rub it down with your finger to remove bubbles and stick it securely.

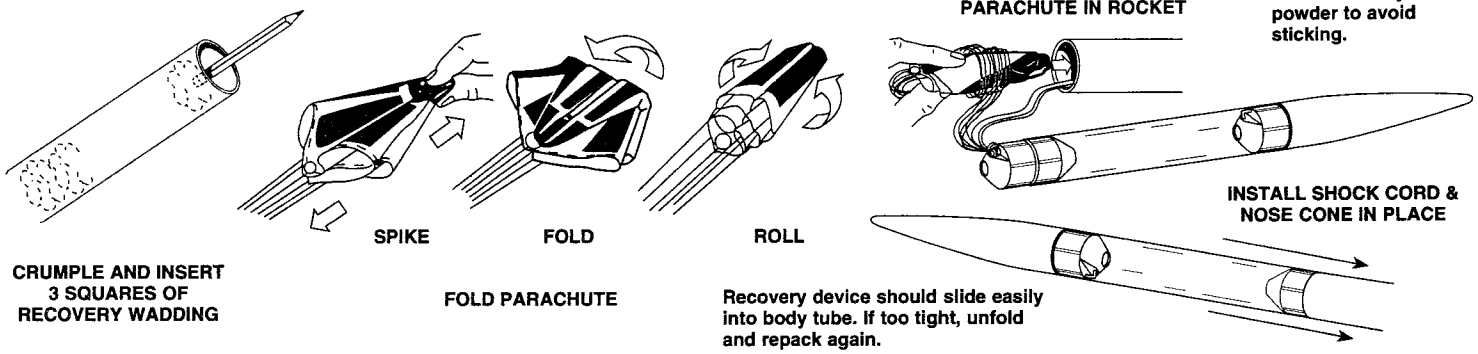


WHAT TO EXPECT WHEN FLYING YOUR HIJAX™ ROCKET

Your new HiJax™ represents the latest in model rocket design and component technology. Sporting an integrated engine mount and pre-aligned fin slots, the HiJax™ utilizes the maximum energy available from whatever recommended engine you use. No thrust is wasted. Using a C6-5 engine, the HiJax™ will approach 305 meters (1000 feet) in altitude. If your model is loaded with a payload, expect slightly less altitude for a given engine. Remember to "size" your field and engine properly. Fly "A" engines from baseball field-size areas, "C" engines from football field-size areas.

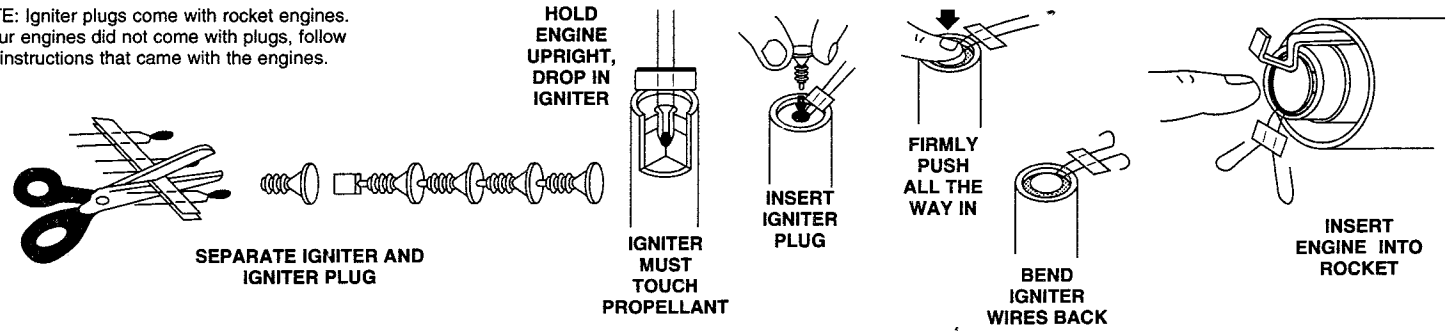
At apogee (the highest point of your rocket's flight), the parachute will eject and the rocket will drift down range with the drift distance depending on the wind speed. Always keep wind conditions in mind when selecting your engine size. Enjoy flying your HiJax™.

ROCKET PREFLIGHT



PREPARE ENGINE

NOTE: Igniter plugs come with rocket engines. If your engines did not come with plugs, follow the instructions that came with the engines.



LAUNCH SUPPLIES

To launch your rocket, you will need the following items:
--Estes Electrical Launch Controller and Launch Pad
--Estes Recovery Wadding No. 2274
--Recommended Estes Engines: A8-3 (First Flight), B4-4, B6-4, B8-5, C5-3, C6-3, or C6-5
To become familiar with your rocket's flight pattern, use an A8-3 engine for your first flight. If your rocket is carrying a payload, use B or C engines only.

Use only Estes products to launch 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 76 meters (250 feet) 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 4° Celsius [40° Fahrenheit]).

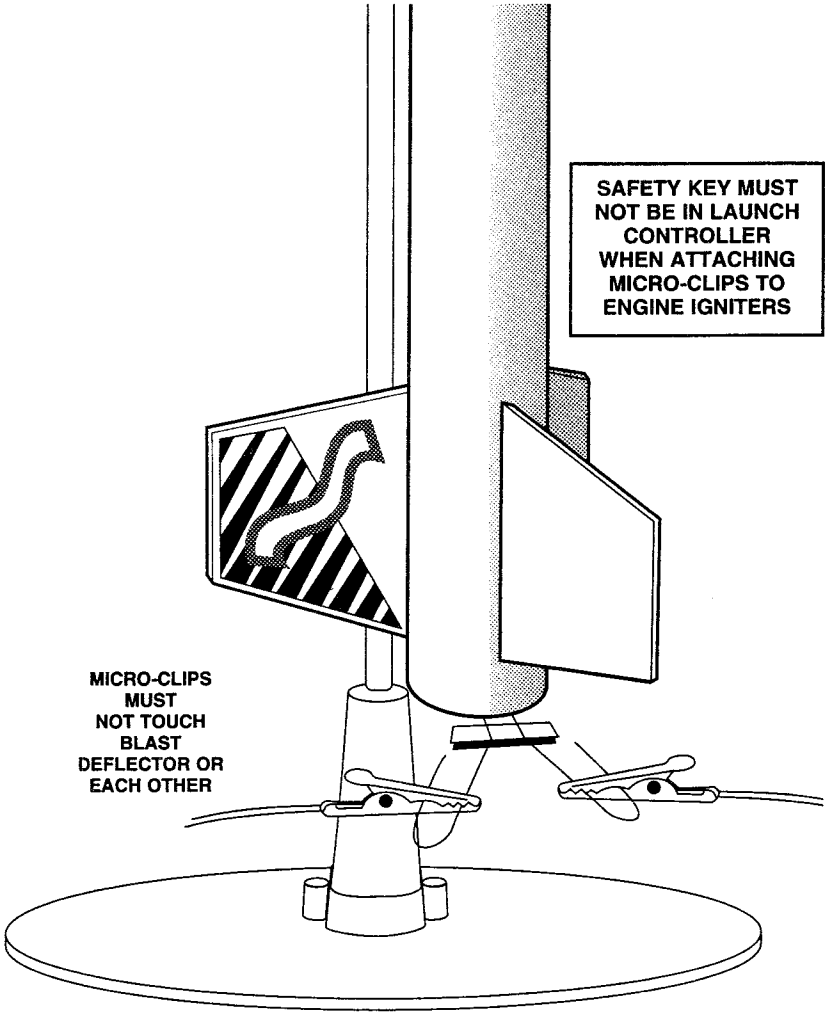
Parachute may be dusted with talcum or baby powder to avoid sticking.

If you use the E2™ or Command Control™ Launch Controllers to fly your models, use the following launch steps:

A. After attaching micro-clips, etc., insert safety key into the controller receptacle. If the igniter clips have been attached properly to the igniter, the red L.E.D. will now begin to flash on and off and the audio continuity indicator will beep on and off.
B. Hold the yellow (left) arm button down. The L.E.D. will stop flashing and the audio indicator will produce a steady tone.
C. Verbally count down from five to zero loud enough for the bystanders to hear. Still holding the yellow arm button down, push and hold the orange (right) button down until the rocket ignites and lifts off.

FOR YOUR SAFETY AND ENJOYMENT

Always follow the National Association of Rocketry (NAR) MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.



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. Make sure micro-clips are clean for a good electrical contact.

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 five meters - 15 feet).

⑥ INSERT SAFETY KEY to arm the launch controller.

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

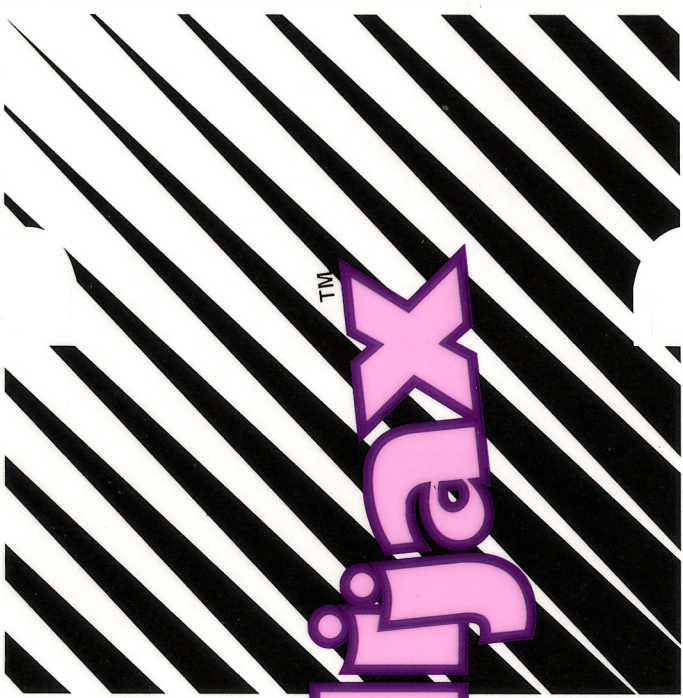
LAUNCH!!

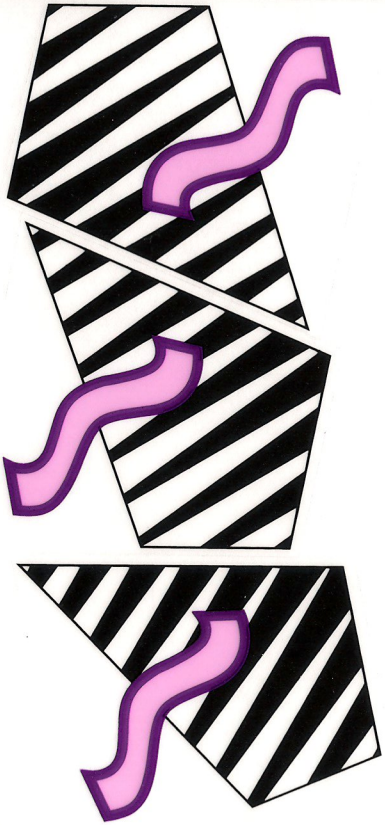
PUSH AND HOLD LAUNCH BUTTON UNTIL ENGINE IGNITES
REMOVE SAFETY KEY FROM LAUNCH CONTROLLER. KEEP SAFETY KEY WITH YOU OR REPLACE SAFETY KEY AND SAFETY CAP ON LAUNCH ROD.

MISFIRES

If the igniter functions properly but the propellant does not ignite, keep in mind the following: 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 reinstall the igniter plug as illustrated above. Repeat the countdown and launch procedure.





Hijax™

ESTES®

PN 037141

Estes Hijax Parts List

Body tube is 11 inches long. A series 10 BT is close to diameter.
Payload section is 6 inches long.
Plastic fins are 1/16th inch thick.
Parachute is 12”.