ESTES INDUSTRIES
1295 H Street
Penrose, CO 81240

The World Leader in Model Rocketry

EX SERIES

(7-98) 84401

EST 2158

ALMOST READY TO FLY

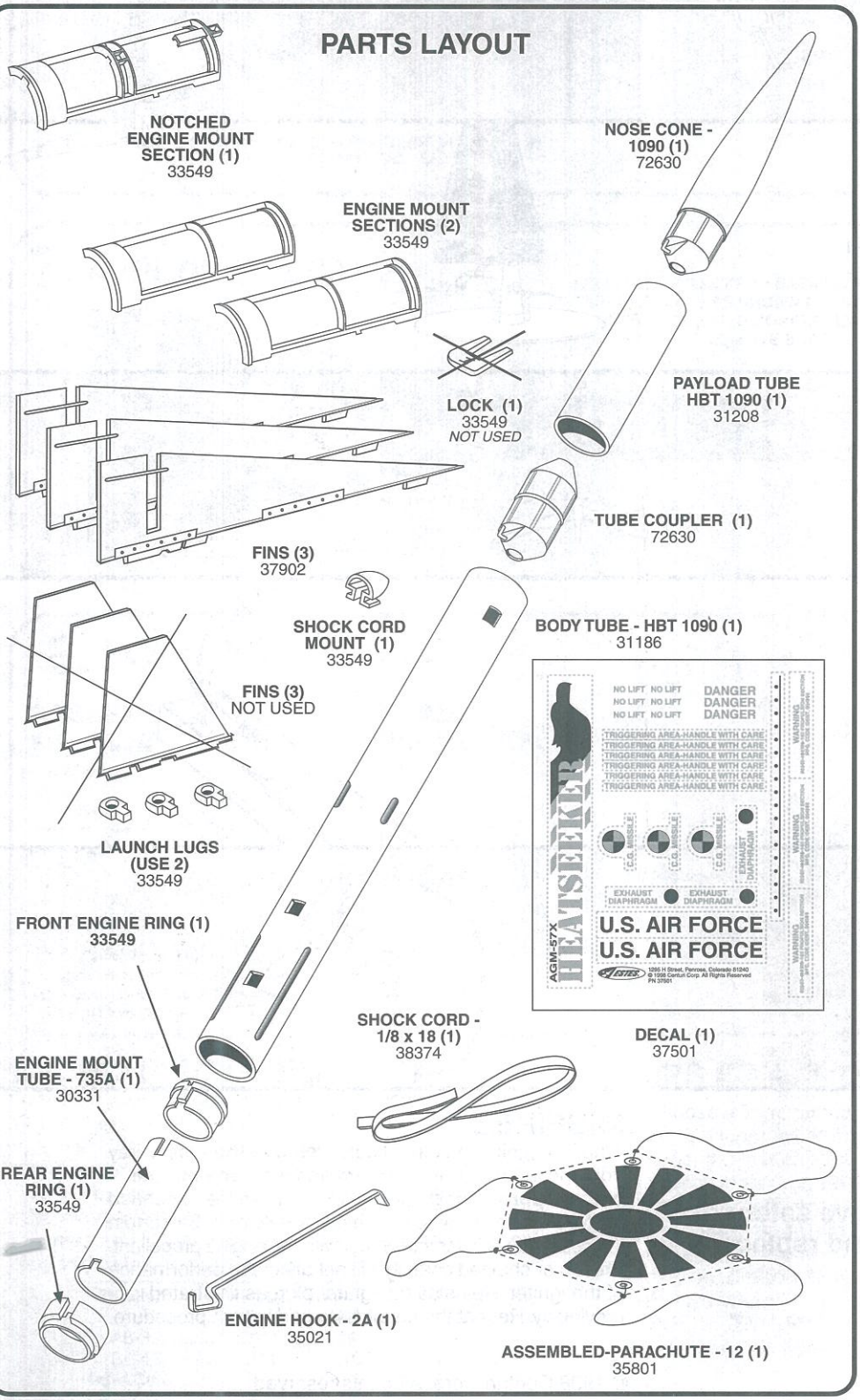
AGM-57X HEATSEEKER™

FLYING MODEL ROCKET KIT INSTRUCTIONS

TOOLS REQUIRED: SCISSORS, PENCIL, HOBBY KNIFE, TUBE-TYPE PLASTIC CEMENT

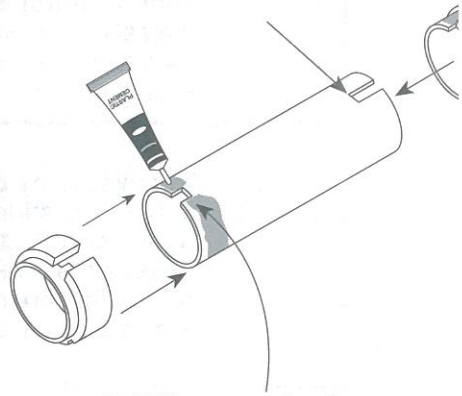
ALL GLUED AREAS ARE SHADED IN GRAY

PARTS LAYOUT



1.

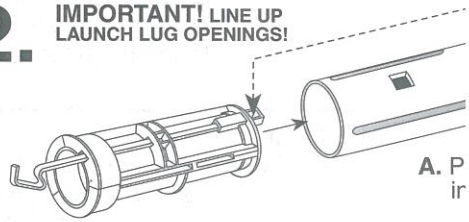
A. Apply plastic cement as shown and slide front engine ring inside engine mount tube. Line up with **long** notch



B. Slide rear engine ring over tube. Line up with **short** notch.

2.

IMPORTANT! LINE UP LAUNCH LUG OPENINGS!



A. P
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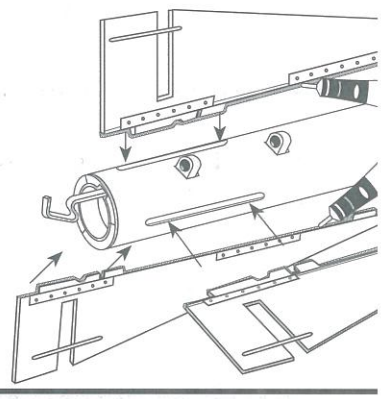
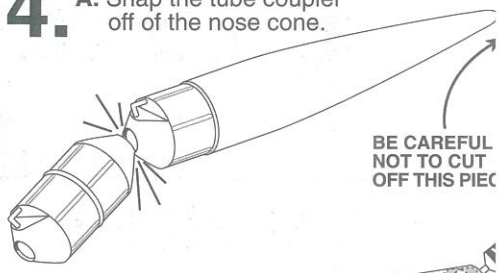
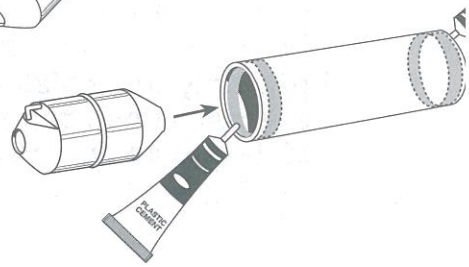


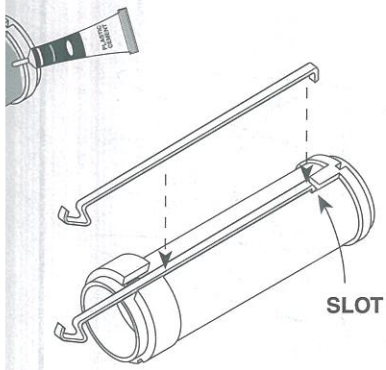
4.

A. Snap the tube coupler off of the nose cone.

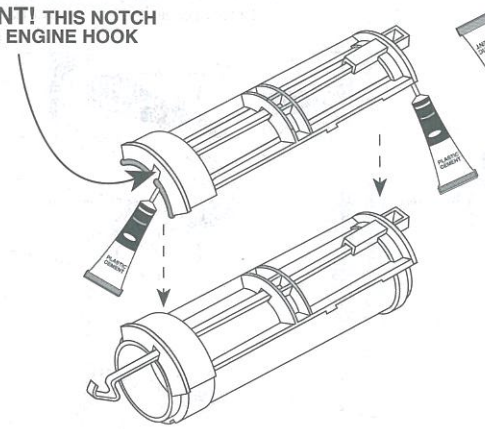


BE CAREFUL NOT TO CUT OFF THIS PIEC

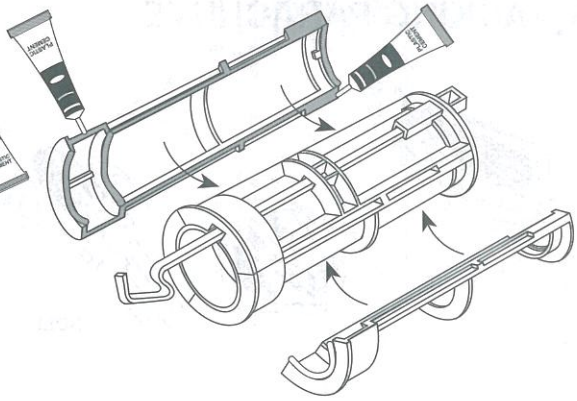




C. Attach engine hook. Push front tab through slot in tube.

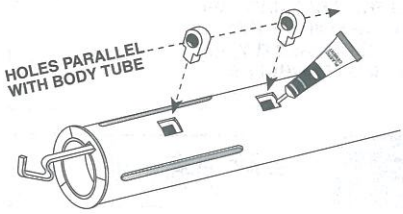


D. Apply cement to underside of **notched** engine mount section and attach.



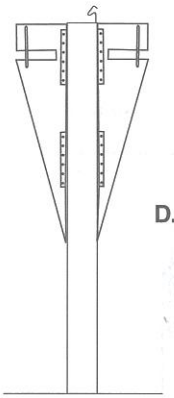
E. Now attach the remaining sections with cement as shown.

engine mount
rear of body tube.



B. Attach launch lugs with plastic cement.

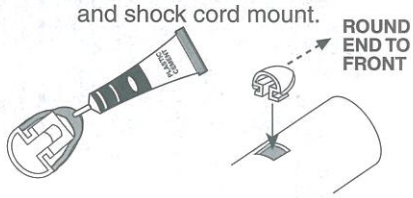
C. Apply plastic cement along the root edge of the fins. Insert fins making sure each fin is sealed in both slots.



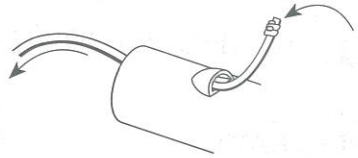
D. Set rocket on table as shown so fins will stay straight while cement sets.

3.

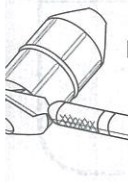
A. Locate elastic shock cord and shock cord mount.



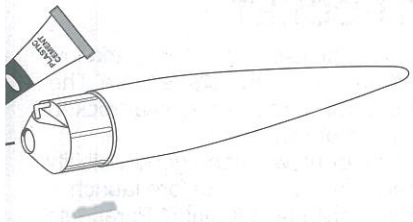
B. Apply plastic cement to the bottom of the shock cord mount as shown. Attach to body tube through square hole.



C. Tie double knot in end of shock cord. Thread other end through until knot is tight against shock cord mount.

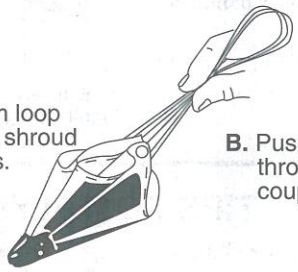


B. Clear out eyelet on rear of tube coupler.

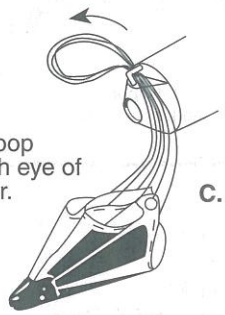


Apply a ring of plastic cement just inside each end of payload tube and insert nose cone and front of coupler as shown.

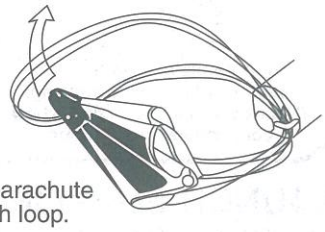
5.



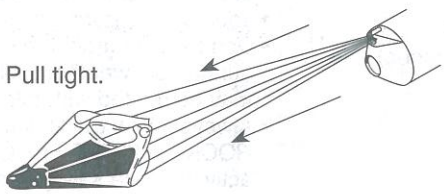
A. Form loop with shroud lines.



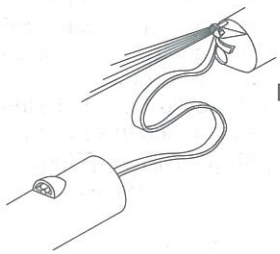
B. Push loop through eye of coupler.



C. Pass parachute through loop.

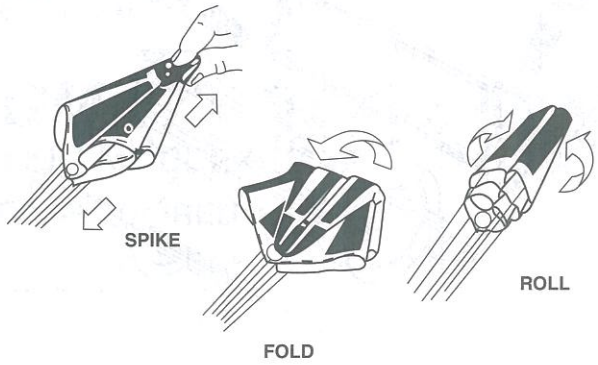


D. Pull tight.



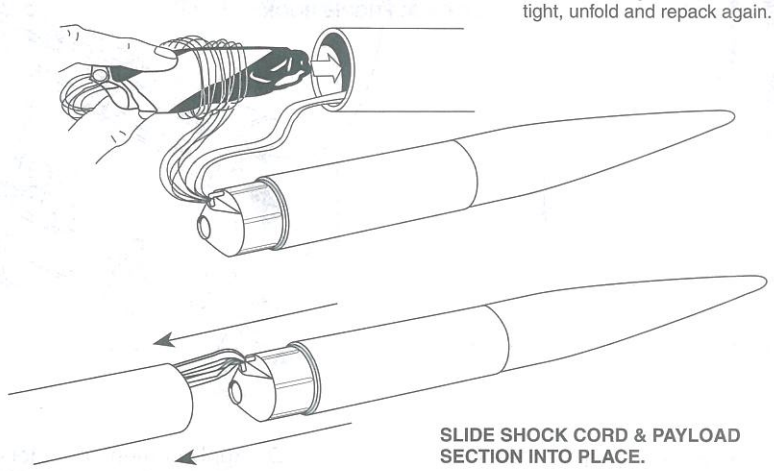
E. Tie shock cord to the eye of the coupler with a double knot.

6. PACKING PARACHUTE



Wrap lines loosely around 'chute. Insert parachute into rocket.

Recovery device should slide easily into body tube. If fit is too tight, unfold and repack again.

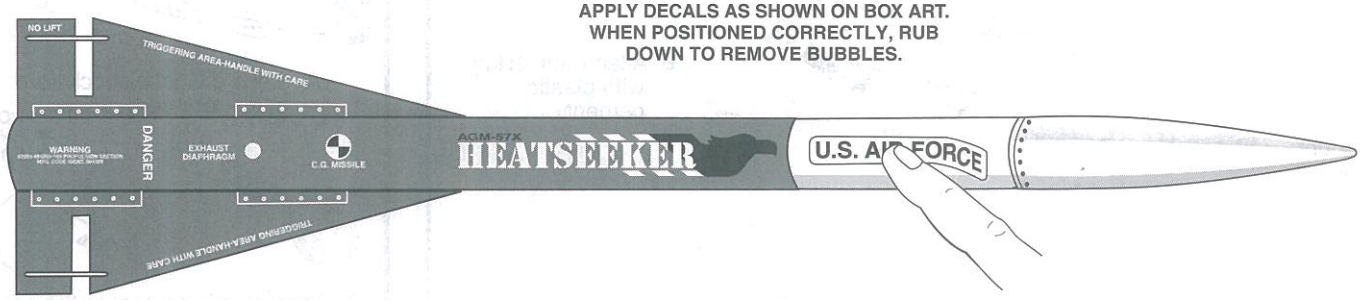


SLIDE SHOCK CORD & PAYLOAD SECTION INTO PLACE.

DO NOT FORGET TO PACK RECOVERY WADDING IN THE ROCKET BEFORE FLYING - SEE STEP 9

7. APPLYING DECALS

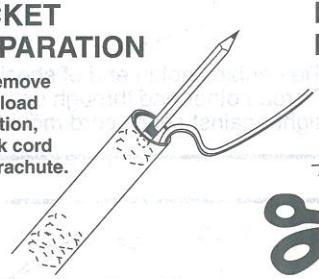
REMOVE DECALS FROM BACKING PAPER. APPLY DECALS AS SHOWN ON BOX ART. WHEN POSITIONED CORRECTLY, RUB DOWN TO REMOVE BUBBLES.



8. FLYING YOUR ROCKET

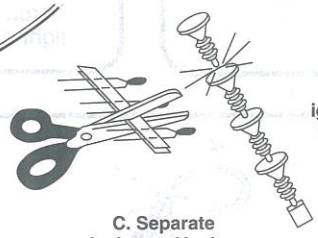
ROCKET PREPARATION

A. Remove payload section, shock cord and parachute.

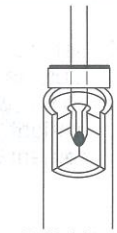


B. Crumple and insert three squares of recovery wadding. Repack and insert parachute, shock cord and payload section.

ENGINE PREPARATION

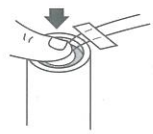


C. Separate igniter and igniter



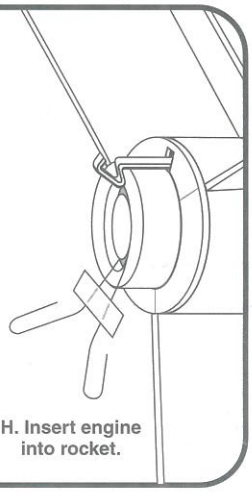
D. Hold engine upright, drop in igniter. Igniter must touch propellant.

E. Insert igniter plug.



F. Firmly push all the way in.

G. Bend igniter wires back.



H. Insert engine into rocket.

LAUNCH SUPPLIES

To launch your rocket, you will need the following:

- Launch Pad (Estes Porta-Pad® II)
- Launch Controller (Estes Electron Beam®)
- Recommended Estes Engines: A8-3, B4-4, B6-4, B6-6, C6-5 or C6-7. For your first flight, use an A8-3 engine.
- Recovery Wadding (EST 302274)
- Igniters and Igniter Plugs (included with Estes engines)

Use only Estes products to launch this rocket.

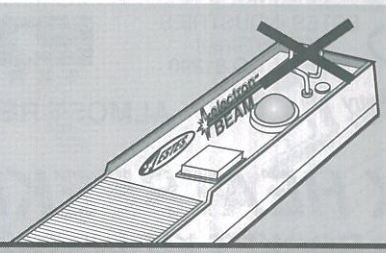
ENGINE	PROJECTED ALTITUDE	
	Feet	Meters
A8-3	137	42
B4-4	351	107
B6-4/B6-6	377	115
C6-5/C6-7	800	244

TIPS FOR FLYING YOUR ROCKET

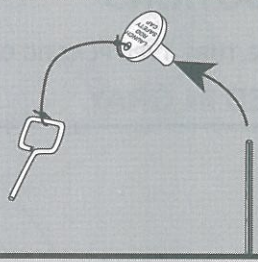
- Choose a large field away from power lines, buildings, tall trees, and low flying aircraft. Try to find a field at least 250 feet (76 meters) square. The larger the launch area, the better your chance of recovering your rocket.
- Launch area must be free of dry weeds and brown grass.
- Launch only 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 or baby powder to avoid sticking.
- Always follow the National Association of Rocketry (NAR) MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities. The safety code is enclosed with this kit.

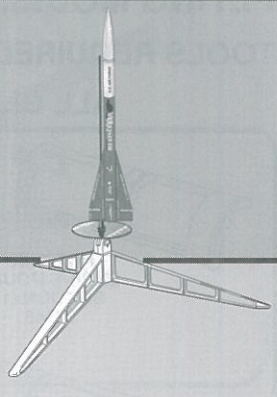
COUNTDOWN AND LAUNCH

10... **Safety key must not be in launch controller.**
The safety cap with safety key attached should already be on the launch rod.

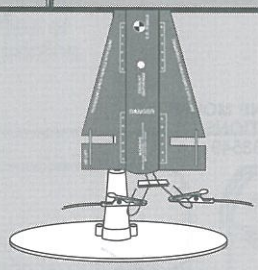


9... **Remove safety cap from launch rod, slide launch lugs over rod. Make sure rocket slides freely and micro-clips are clean for good electrical contact.**

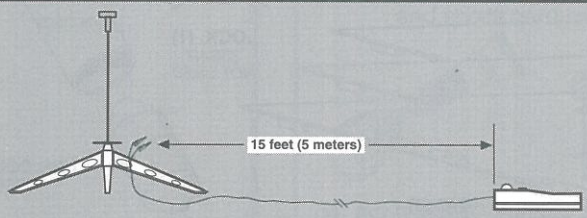




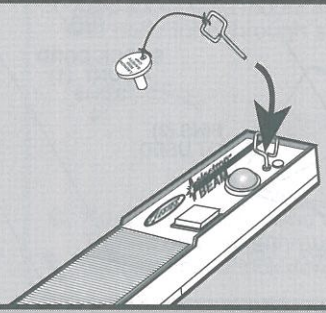
8... Attach micro-clips to the igniter wires. Arrange the micro-clips so they do not touch each other or the metal blast deflector. Attach micro-clips as close to protective tape on igniter as possible.



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

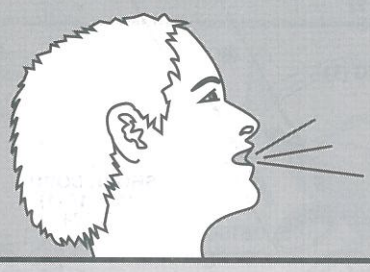


6... **Insert safety key to arm the launch controller.**



5... Start audible countdown.

4...3...2...1.....



LAUNCH!

Push and hold button until engine ignites.

For safety, immediately remove safety key from launch controller and replace safety cap on launch rod.

MISFIRES

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. Broken or chipped coating will not affect the performance of the igniter. Reinstall the igniter plug as illustrated previously. Repeat the countdown and launch procedure.