



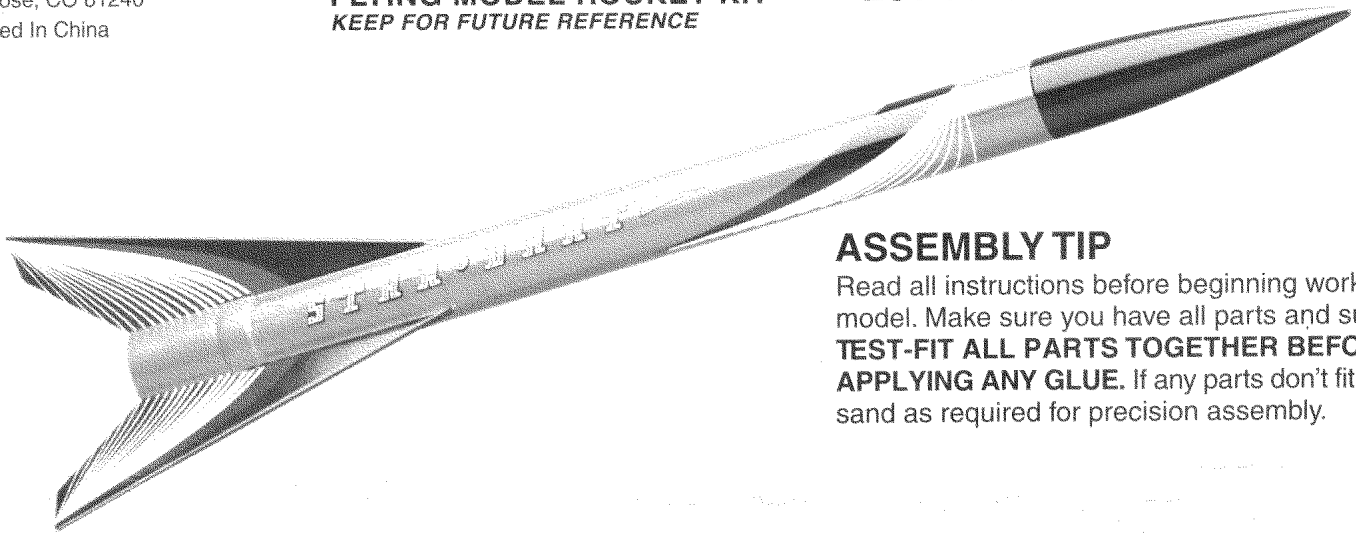
www.estesrockets.com

Estes Industries
1295 H Street
Penrose, CO 81240
Printed In China

STAR-DART™

FLYING MODEL ROCKET KIT
KEEP FOR FUTURE REFERENCE

EST 2170

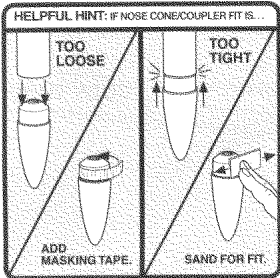
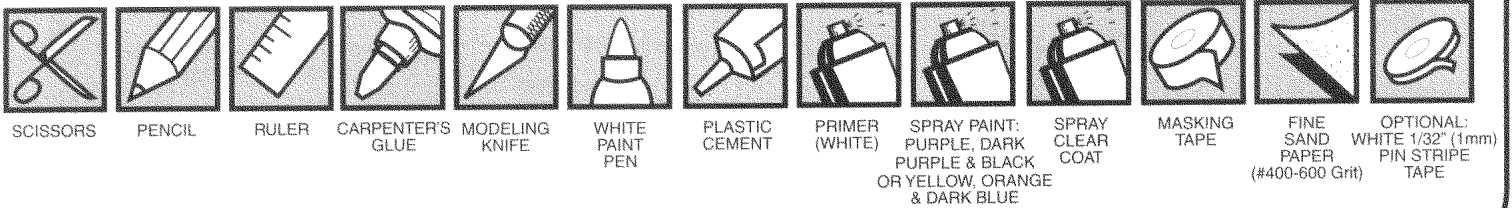


ASSEMBLY TIP

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.

SUPPLIES

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



PARTS

Locate the parts shown below and lay them out on the table in front of you.
DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.

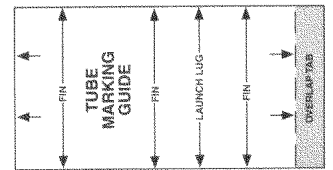
Body Tube (1) (030314)

Nose Cone Insert (1) (072603)

Nose Cone (1) (072602)

Engine Retainer Ring - Mylar (1) (030168)

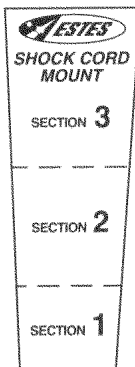
Launch Lug (1) (038175)



Tube Marking Guide (1) (on page 2)

Yellow Spacer Tool (1) (035003)

Green Engine Block (1) (030162-2)

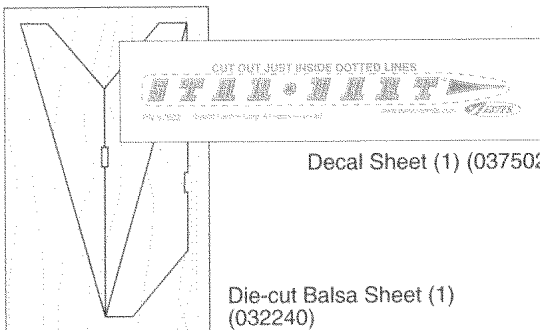


Shock Cord Mount (1)

Decal Sheet (1) (037502)

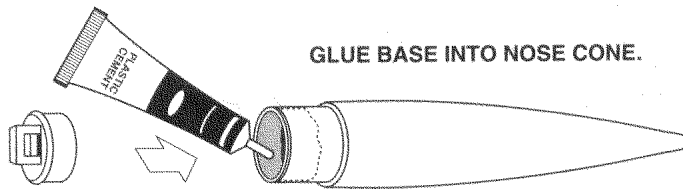
Assembled Parachute 12" (30 cm) w/ Engine Hook and Shock Cord (1) (035804)

Die-cut Balsa Sheet (1) (032240)

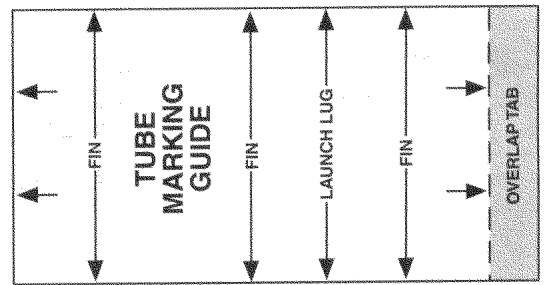


1.

NOTE: USE PLASTIC CEMENT ONLY IN THIS STEP.

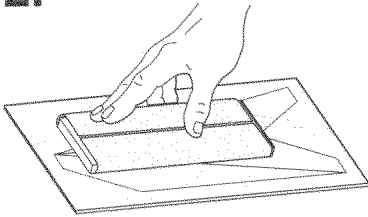


GLUE BASE INTO NOSE CONE.

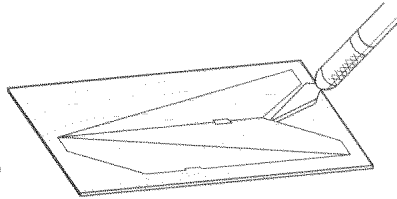


2.

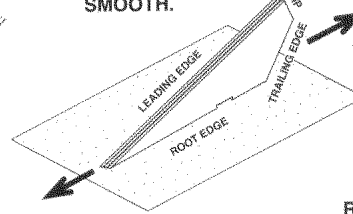
A. FINE SAND Balsa SHEET.



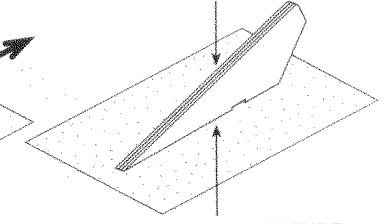
B. CUT FINS FREE WITH MODELING KNIFE.



C. STACK FINS TOGETHER AND SAND EDGES SMOOTH.



D. ROUND LEADING EDGES.

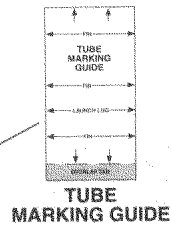
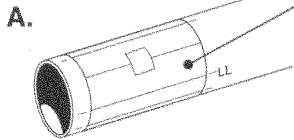


ROOT EDGE GLUES TO BODY TUBE. (DO NOT ROUND!)

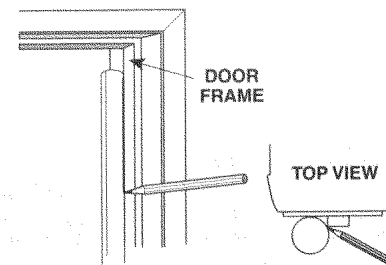
3.

NOTE: SAND BODY TUBE WITH FINE SANDPAPER BEFORE MARKING.

CUT OUT TUBE MARKING GUIDE FROM TOP OF PAGE. TAPE AROUND END OF TUBE. MARK TUBE AT ARROWS. MARK LAUNCH LUG LINE "LL". REMOVE GUIDE.

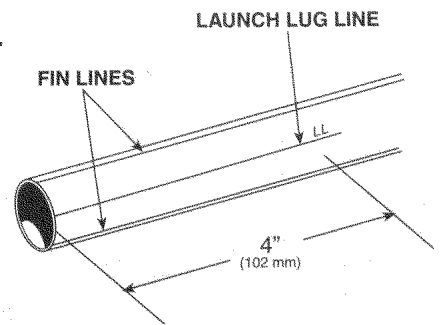


B.



CONNECT FIN LINES.

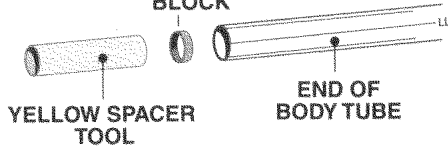
C.



LAUNCH LUG LINE SHOULD BE 4" (102 mm) LONG.

4.

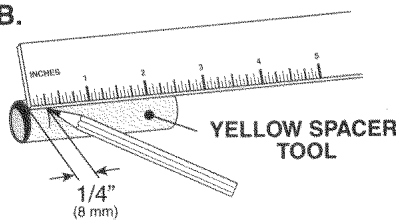
A. GREEN ENGINE BLOCK



YELLOW SPACER TOOL

END OF BODY TUBE

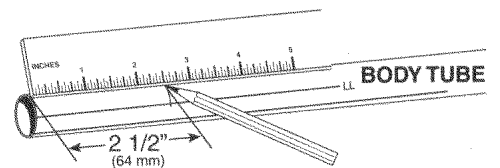
B.



YELLOW SPACER TOOL

1/4" (8 mm)

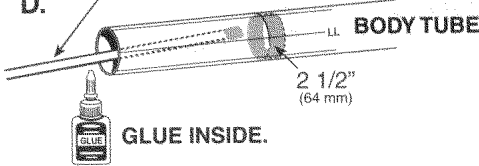
C.



BODY TUBE

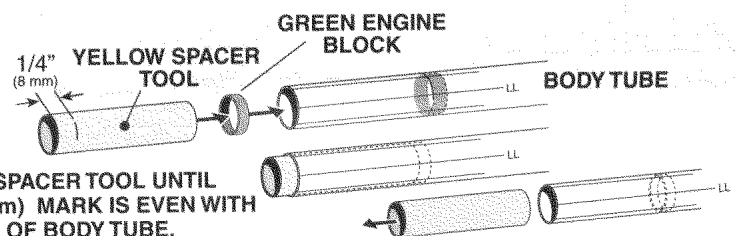
2 1/2" (64 mm)

D. Balsa STICK FROM FIN SCRAP



GLUE INSIDE.

E.



1/4" (8 mm) YELLOW SPACER TOOL

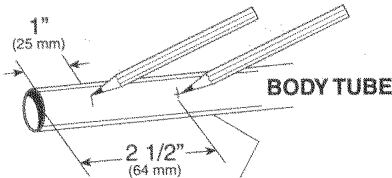
GREEN ENGINE BLOCK

BODY TUBE

INSERT SPACER TOOL UNTIL 1/4" (6 mm) MARK IS EVEN WITH BOTTOM OF BODY TUBE.

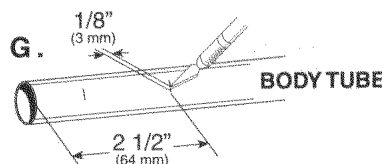
REMOVE SPACER TOOL IMMEDIATELY.

F.



MARK IS HALFWAY BETWEEN TWO FIN LINES. LAUNCH LUG LINE IS BETWEEN OTHER FIN LINES.

G.

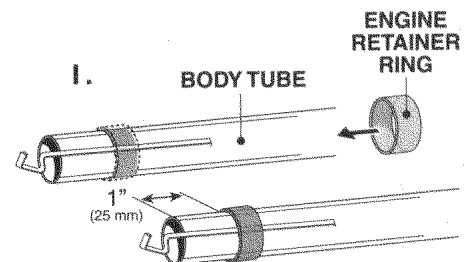


H.



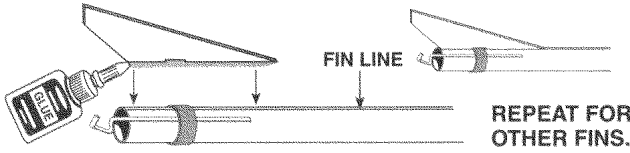
POSITION ENGINE HOOK. APPLY GLUE AROUND TUBE AT 1" (25 mm) MARK.

I.



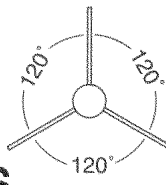
SLIDE RING OVER TUBE AND ENGINE HOOK TO 1" (25 mm) MARK.

5. A. APPLY THIN LAYER OF GLUE. WAIT 1 MINUTE. APPLY 2nd LAYER AND ATTACH FIN CENTERED ON FIN LINE.

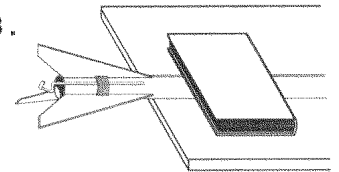


YES

FINS PROJECT STRAIGHT FROM THE BODY

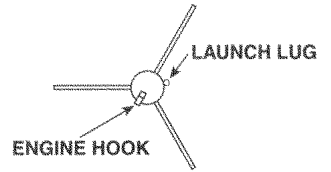
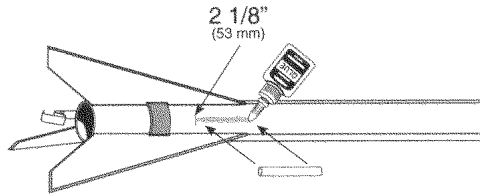
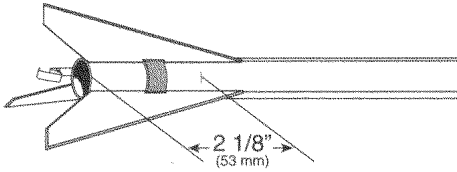


B.



SUPPORT ROCKET UNTIL GLUE DRIES.

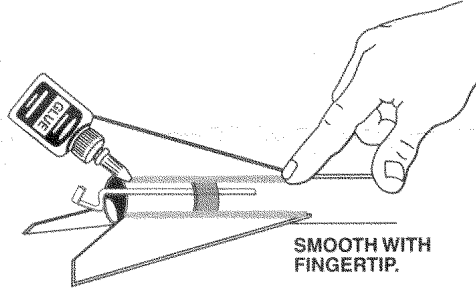
6.



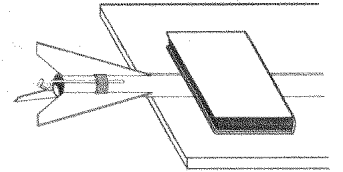
7.

PROCEED WITH THIS STEP ONLY AFTER GLUE ON FIN'S AND LAUNCH LUG IS THOROUGHLY DRY.

APPLY GLUE FILLETS TO ALL FIN AND LAUNCH LUG/BODY TUBE JOINTS.



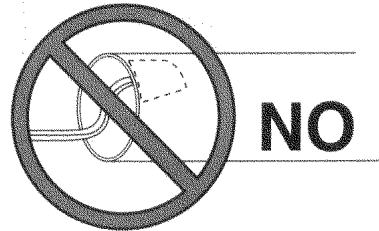
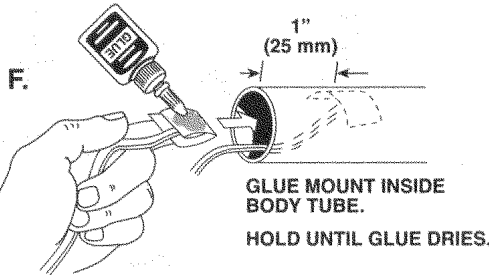
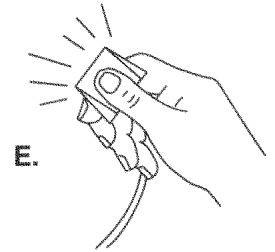
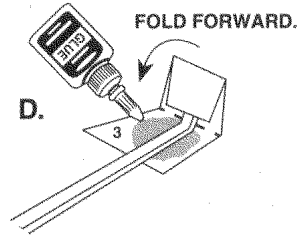
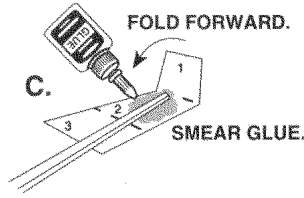
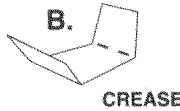
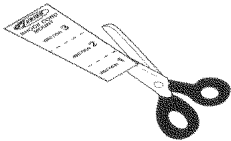
SMOOTH WITH FINGERTIP.



SUPPORT ROCKET UNTIL GLUE FILLETS DRY.

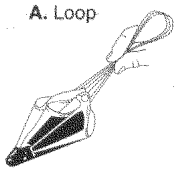
8.

A. CUT OUT SHOCK CORD MOUNT FROM FRONT PAGE.

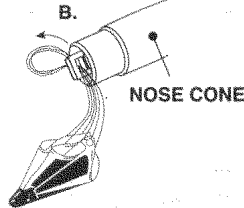


9.

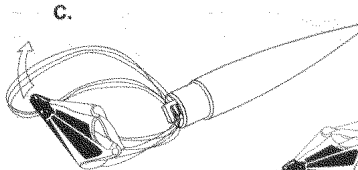
A. Loop



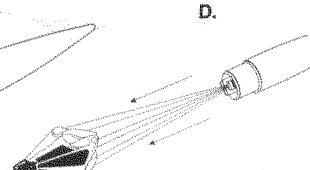
B.



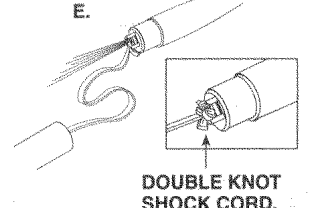
C.



D.



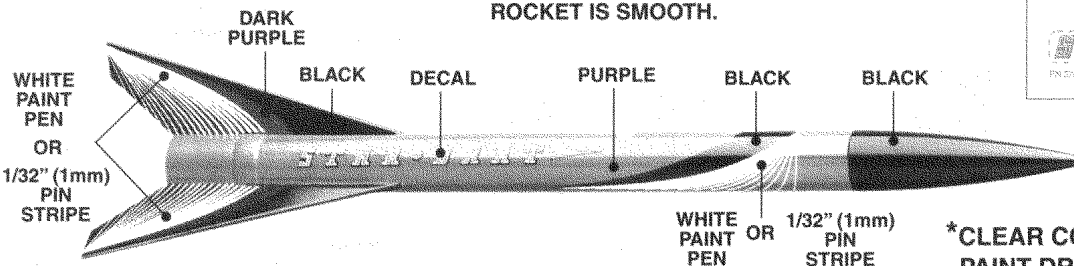
E.



"CONVENTIONAL" PAINT SCHEME

FIRST SPRAY ROCKET WITH WHITE PRIMER, DRY & SAND. REPEAT UNTIL ROCKET IS SMOOTH.

DECAL

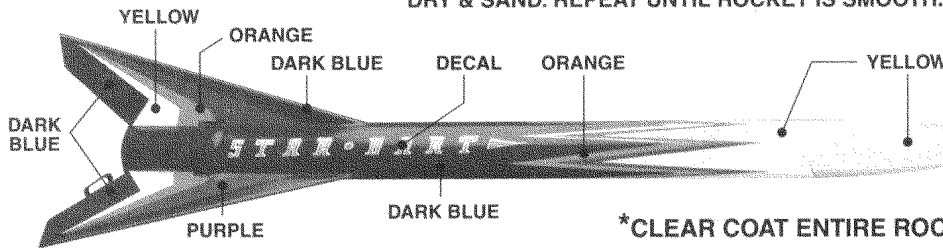


*CLEAR COAT ENTIRE ROCKET WHEN PAINT DRIES.

"WILD" PAINT SCHEME

FIRST SPRAY ROCKET WITH WHITE PRIMER, DRY & SAND. REPEAT UNTIL ROCKET IS SMOOTH.

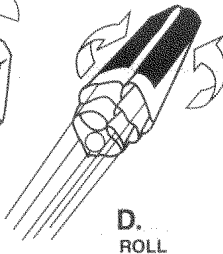
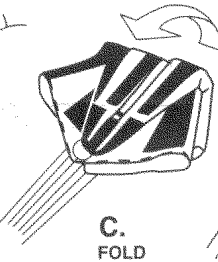
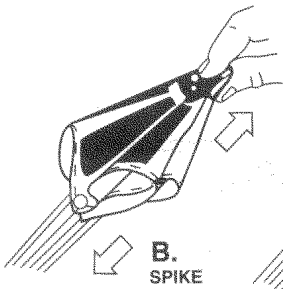
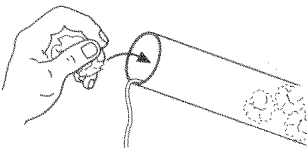
DECAL



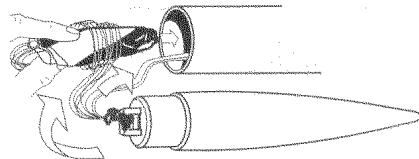
*CLEAR COAT ENTIRE ROCKET WHEN PAINT DRIES.

ROCKET PREFLIGHT

A. INSERT 3 OR 4 LOOSELY CRUMPLED SQUARES OF RECOVERY WADDING.



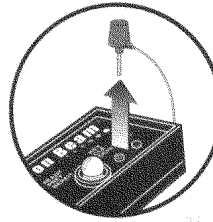
E. WRAP LINES LOOSELY, INSERT 'CHUTE, SHOCK CORD AND NOSE CONE.



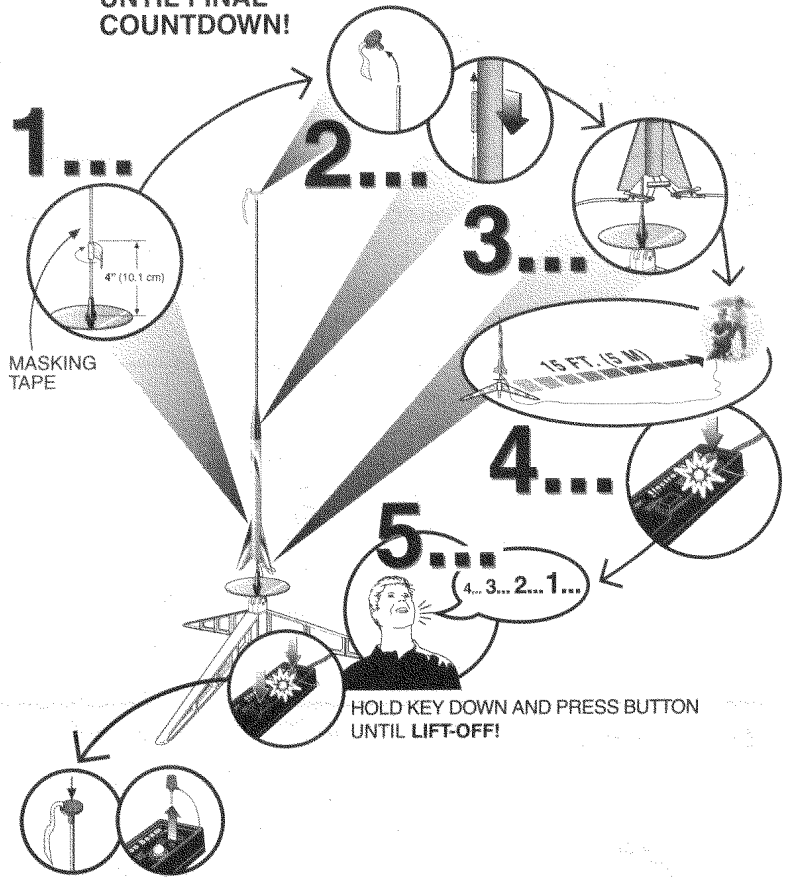
COUNTDOWN AND LAUNCH

LAUNCH SUPPLIES
(Sold Separately)

- Estes® Porta Pad® II and Electron Beam® Controller
- Recovery Wadding
- Igniters (w/ Engines)
- Igniter Plugs (w/ Engines)
- Estes® Engines: A8-3 (First Flight), B4-4, B6-4, B6-6, C6-5, C6-7



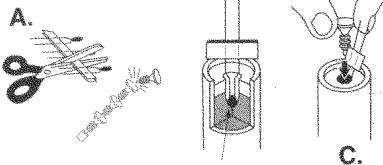
KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!



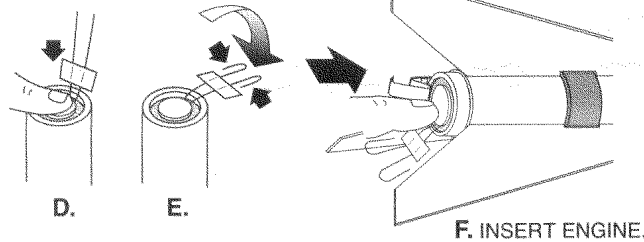
ENGINE PREP

WARNING: FLAMMABLE
Before proceeding read instructions & NAR Safety Code included with engines.

PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!
If you do not use your prepared engine, remove the igniter before storing your engine.

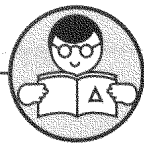


B. TIP MUST TOUCH PROPELLANT.



PRECAUTIONS

NAR Safety Code



NO DRY GRASS OR WEEDS

FLYING YOUR ROCKET

Choose a large field (500 ft. [76 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the National Association of Rocketry (NAR) SAFETY CODE.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.



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