



EstesRockets.com

# MINTAKA

1113/1867

AGES  
10+



Skill Level

**INTERMEDIATE**

## MODEL ROCKET INSTRUCTIONS

### KEEP FOR FUTURE REFERENCE

**IMPORTANT:** Please record date found on decal and keep for future reference. \_\_\_\_\_

**READ ALL INSTRUCTIONS.** Make sure you have all parts and supplies. Test fit all parts before applying glue. Refer to your glue manufacturer's dry times during build.

### DESIGNER RECOMMENDATIONS:

- Wall line count 2-3.
- Infill density 7-10%.
- Position all parts with the top pointed up.
- For the Bellatrix and Rigel rockets, turn on supports from print bed only
- Filament Type: PLA, PETG, or ABS

### SUPPLIES



YELLOW GLUE



PENCIL



HOBBY KNIFE



RULER

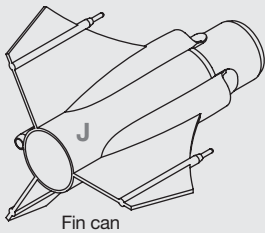


FINE SANDPAPER

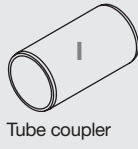


CA GLUE

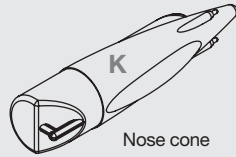
### Parts to be 3D printed



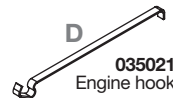
Fin can



Tube coupler



Nose cone



035021  
Engine hook



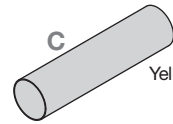
030164-2  
Centering ring



080425  
Split centering ring



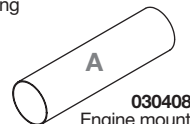
030162-2  
Engine block



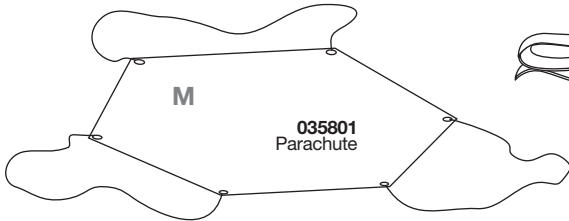
035003  
Yellow spacer tube



030168  
Mylar retainer ring



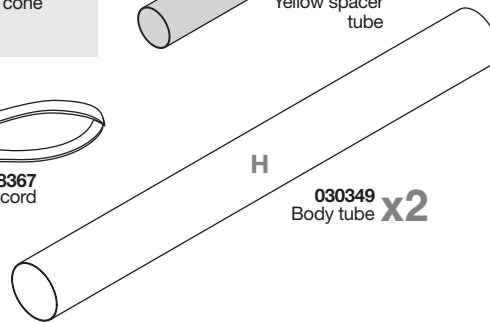
030408  
Engine mount



035801  
Parachute



038367  
Shock cord

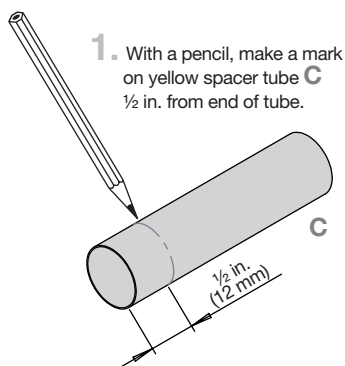


030349  
Body tube x2



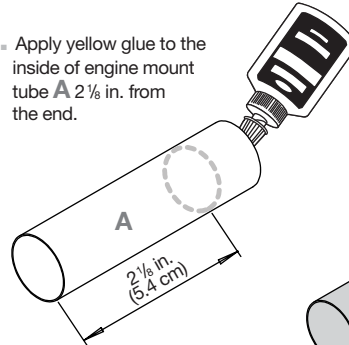
090001-1867  
Self stick decals

### ASSEMBLE ENGINE MOUNT

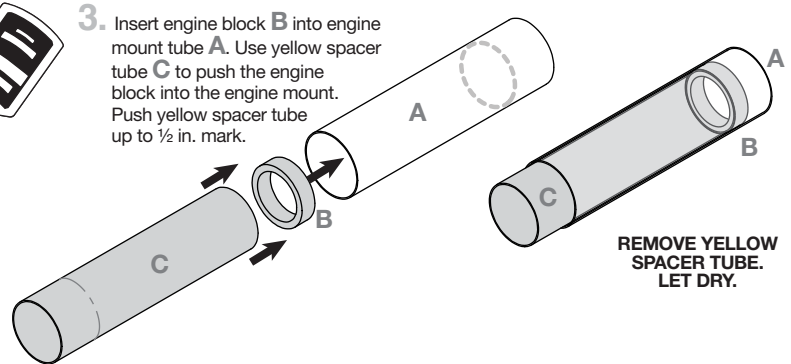


1. With a pencil, make a mark on yellow spacer tube C 1/2 in. from end of tube.

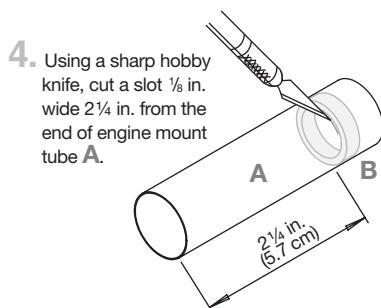
2. Apply yellow glue to the inside of engine mount tube A 2 1/8 in. from the end.



3. Insert engine block B into engine mount tube A. Use yellow spacer tube C to push the engine block into the engine mount. Push yellow spacer tube up to 1/2 in. mark.

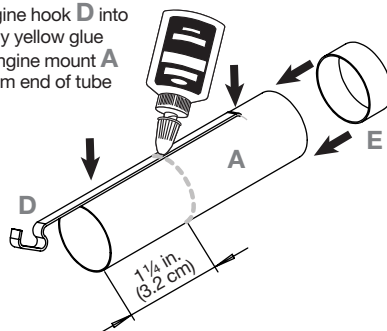


REMOVE YELLOW SPACER TUBE. LET DRY.

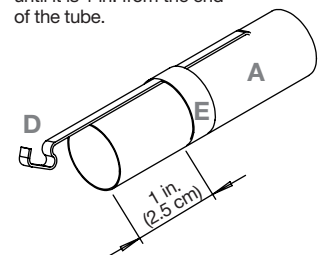


4. Using a sharp hobby knife, cut a slot 1/8 in. wide 2 1/4 in. from the end of engine mount tube A.

5. Place engine hook D into slot. Apply yellow glue around engine mount A 1 1/4 in. from end of tube

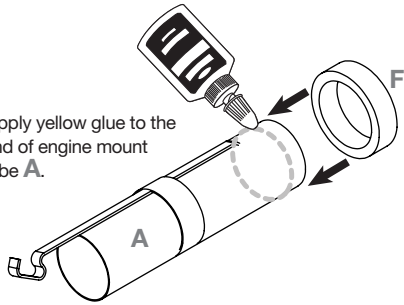


6. Slide mylar ring E over engine mount A and engine hook D until it is 1 in. from the end of the tube.

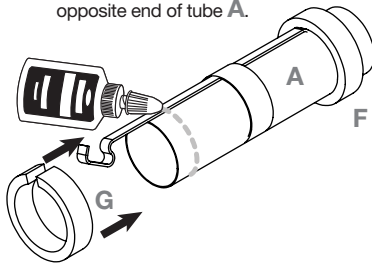


### ASSEMBLE ENGINE MOUNT (CONTINUED)

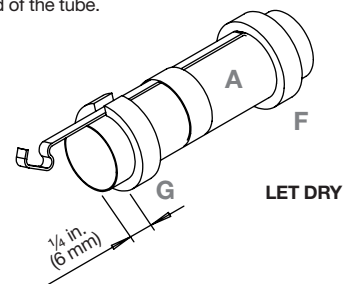
7. Apply yellow glue to the end of engine mount tube A.



8. Slide centering ring F over the end of tube A until it makes contact with engine hook D. Apply yellow glue to opposite end of tube A.

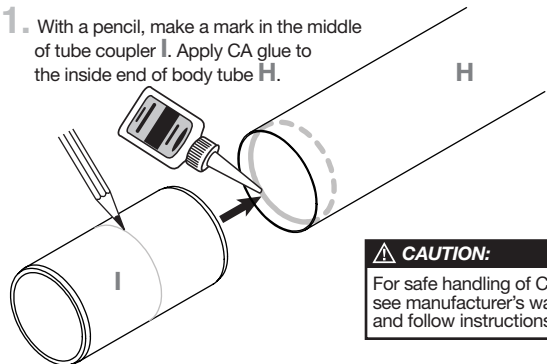


9. Slide split centering ring G over the end of tube A until it is 1/4 in. from the end of the tube.



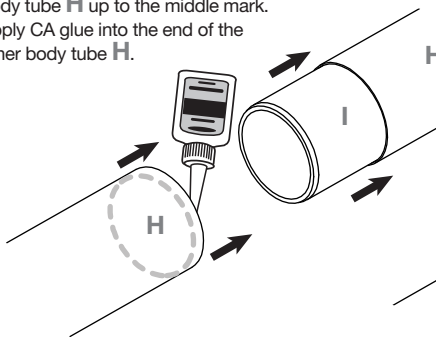
### ASSEMBLE BODY TUBES

1. With a pencil, make a mark in the middle of tube coupler I. Apply CA glue to the inside end of body tube H.

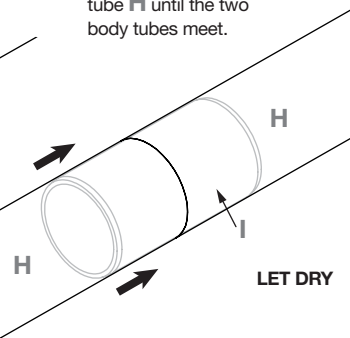


**CAUTION:**  
For safe handling of CA glue, see manufacturer's warnings and follow instructions for use.

2. Insert tube coupler I into the glued end of body tube H up to the middle mark. Apply CA glue into the end of the other body tube H.

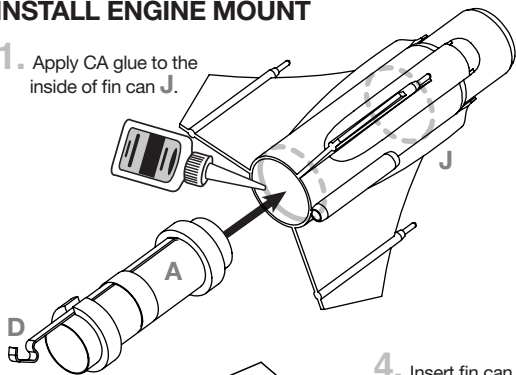


3. Insert tube coupler I into the glued end of the other body tube H until the two body tubes meet.

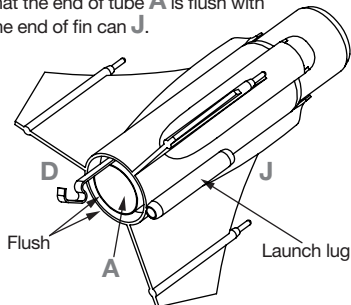


### INSTALL ENGINE MOUNT

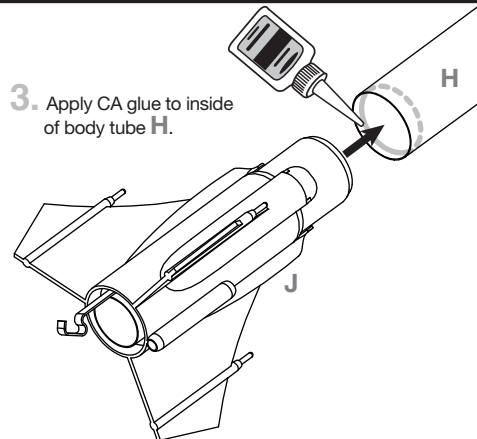
1. Apply CA glue to the inside of fin can J.



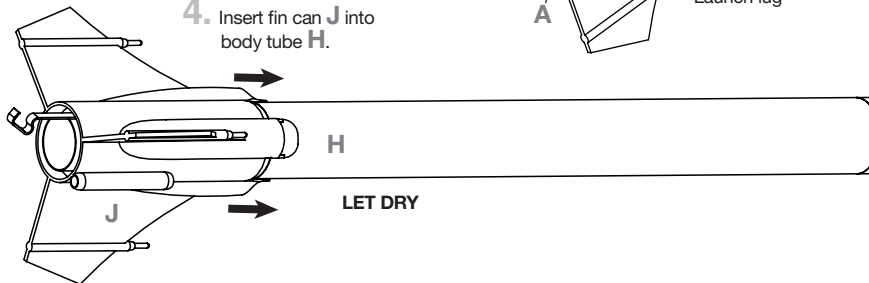
2. Insert engine mount A into fin can J. Make sure engine hook D does NOT align with the launch lug. But be sure that the end of tube A is flush with the end of fin can J.



3. Apply CA glue to inside of body tube H.



4. Insert fin can J into body tube H.



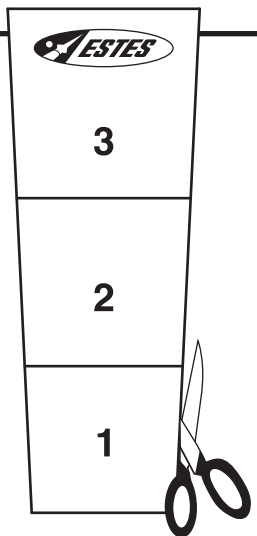
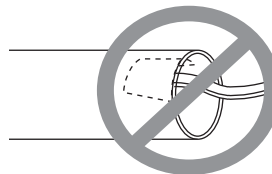
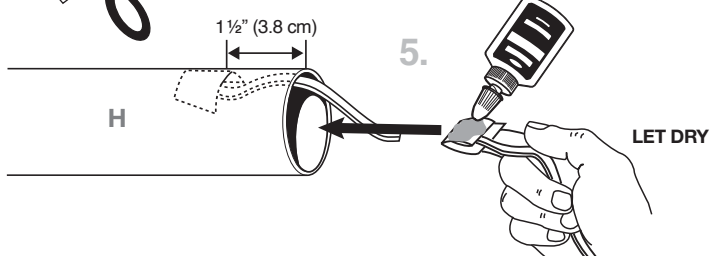
### INSTALL SHOCK CORD

1. Cut a piece of shock cord L to 1 1/2" (3.8 cm) long.

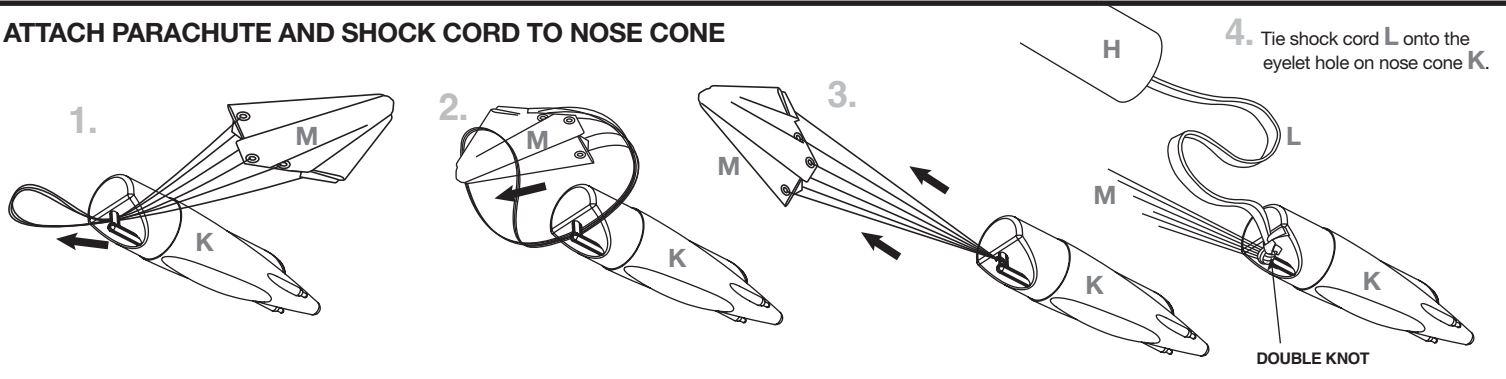
2. Apply CA glue to one end of shock cord L.

3. Apply CA glue to the other end of shock cord L.

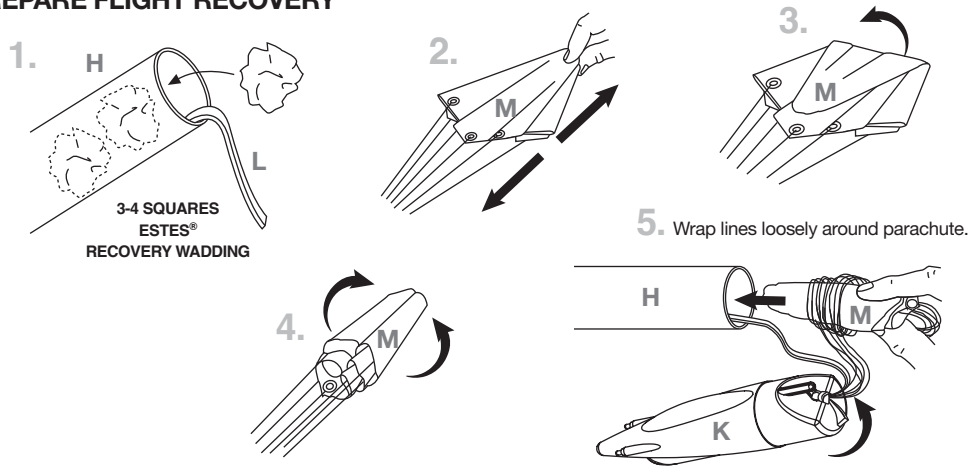
4. Hold until set.



## ATTACH PARACHUTE AND SHOCK CORD TO NOSE CONE



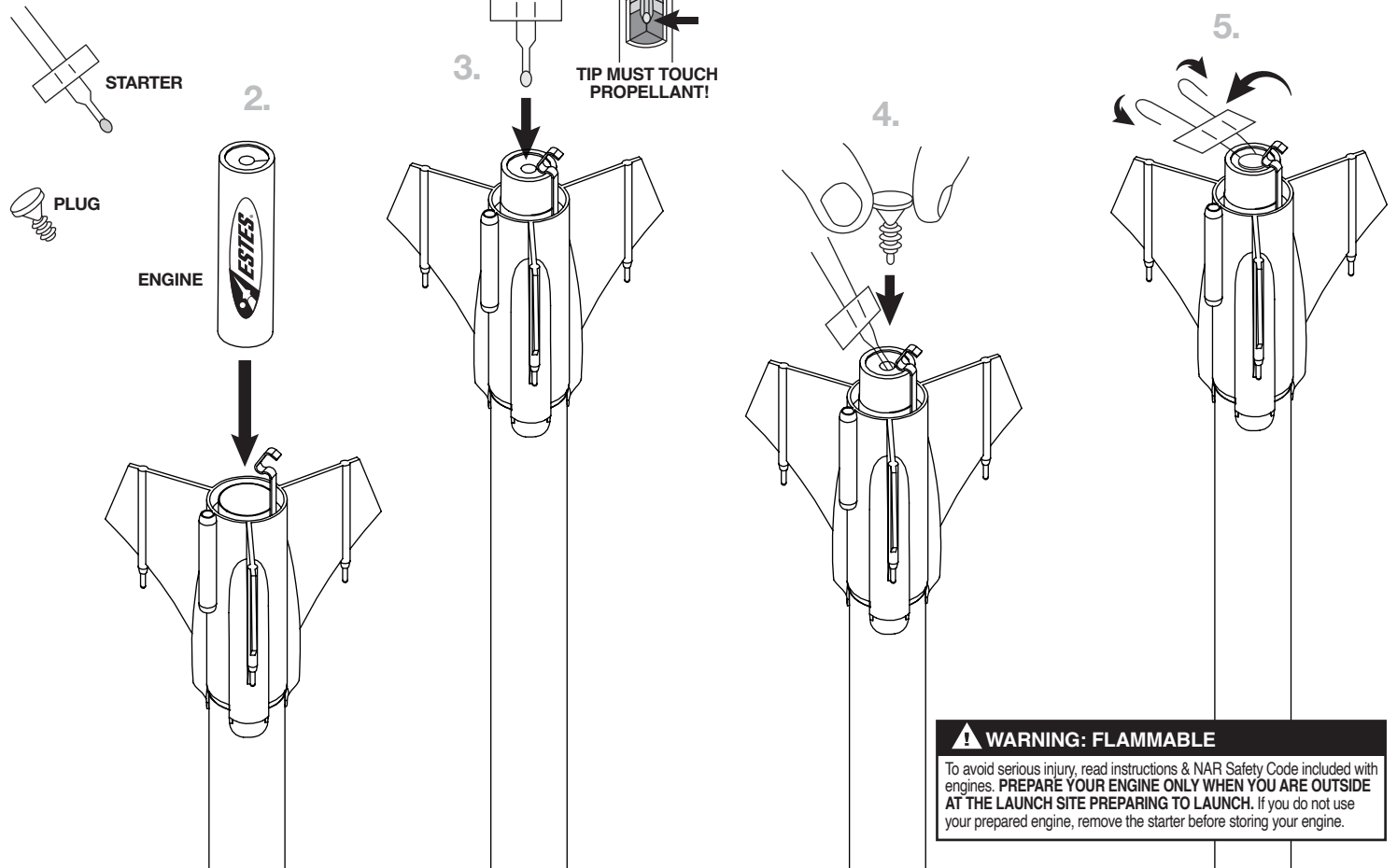
## PREPARE FLIGHT RECOVERY



**NOTE:**  
Recovery wadding and parachute must slide easily into body tube. If it's too tight, redo.

## PREPARE ENGINE

1. Use one each.

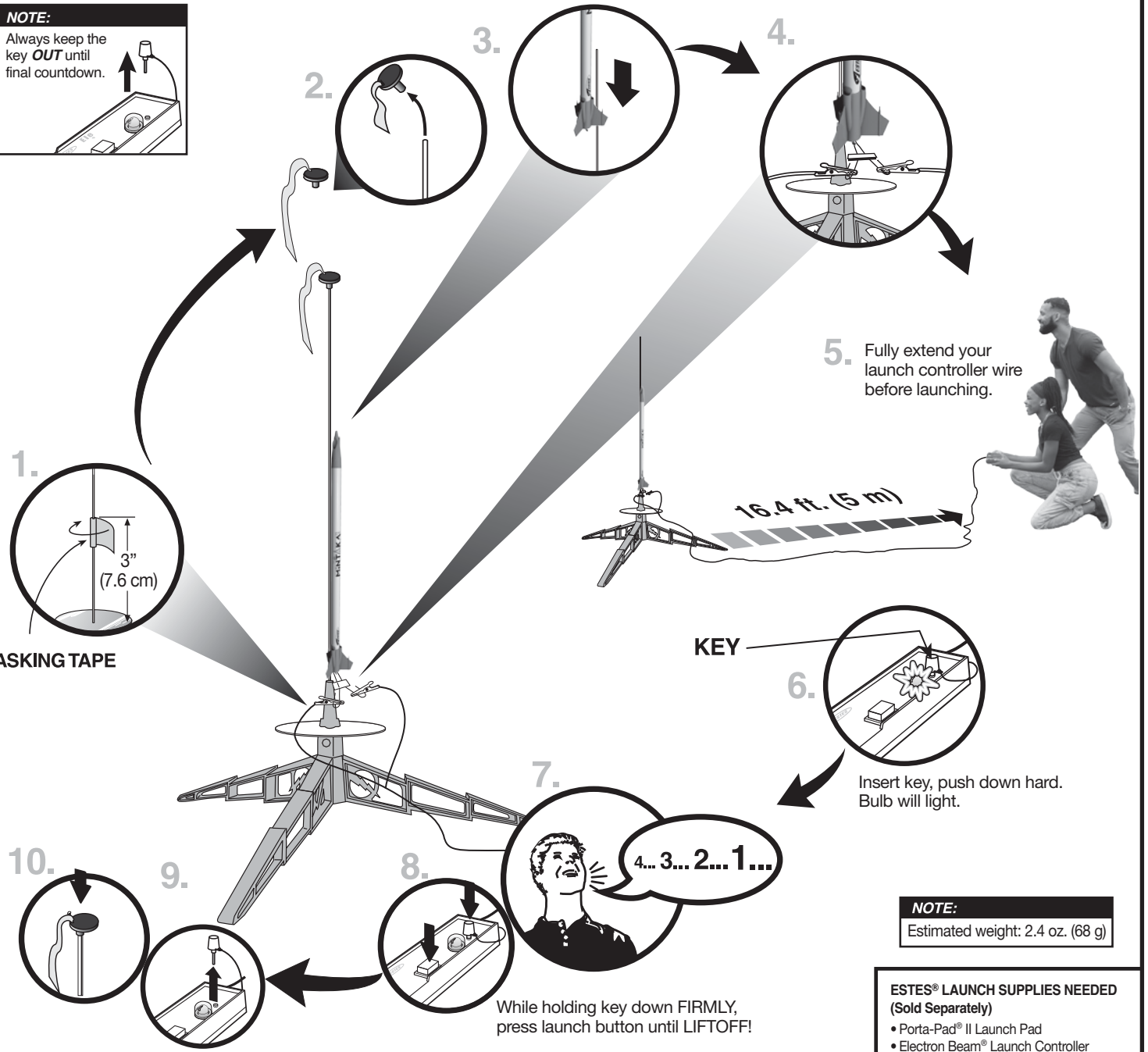


**⚠ WARNING: FLAMMABLE**  
To avoid serious injury, read instructions & NAR Safety Code included with engines. **PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH.** If you do not use your prepared engine, remove the starter before storing your engine.

# COUNTDOWN AND LAUNCH

**NOTE:**

Always keep the key **OUT** until final countdown.



**MASKING TAPE**

**KEY**

**NOTE:**

Estimated weight: 2.4 oz. (68 g)

**ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)**

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: A8-3, B6-4, C6-5

While holding key down **FIRMLY**, press launch button until **LIFTOFF!**

**PRECAUTIONS**



NAR SAFETY CODE



**NO DRY GRASS OR WEEDS**

**PRE-LAUNCH CHECK** For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

**FLYING YOUR ROCKET** Choose a large field (1000 ft. [305 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Launch only with little or no wind and good visibility. Always follow the National Association of Rocketry (NAR) SAFETY CODE (enclosed).

**MISFIRES TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET.** Disconnect the micro-clips and remove the engine. Take the plug and starter out of the engine. A burned starter means the starter tip was not touching engine propellant. Install a new starter; be sure the tip is touching propellant inside the engine. Push the plug in place. Repeat steps under Countdown and Launch.

