



# FLYING MODEL ROCKET KIT INSTRUCTIONS

KEEP FOR FUTURE REFERENCE

www.estesrockets.com

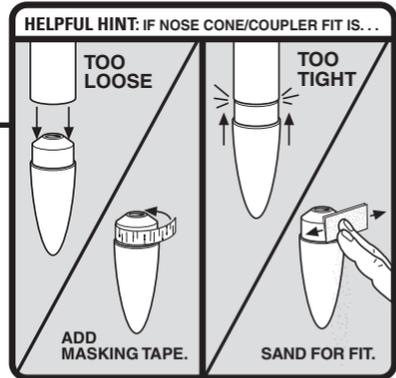
ESTES INDUSTRIES  
1295 H Street  
Penrose, CO 81240

PRINTED IN CHINA



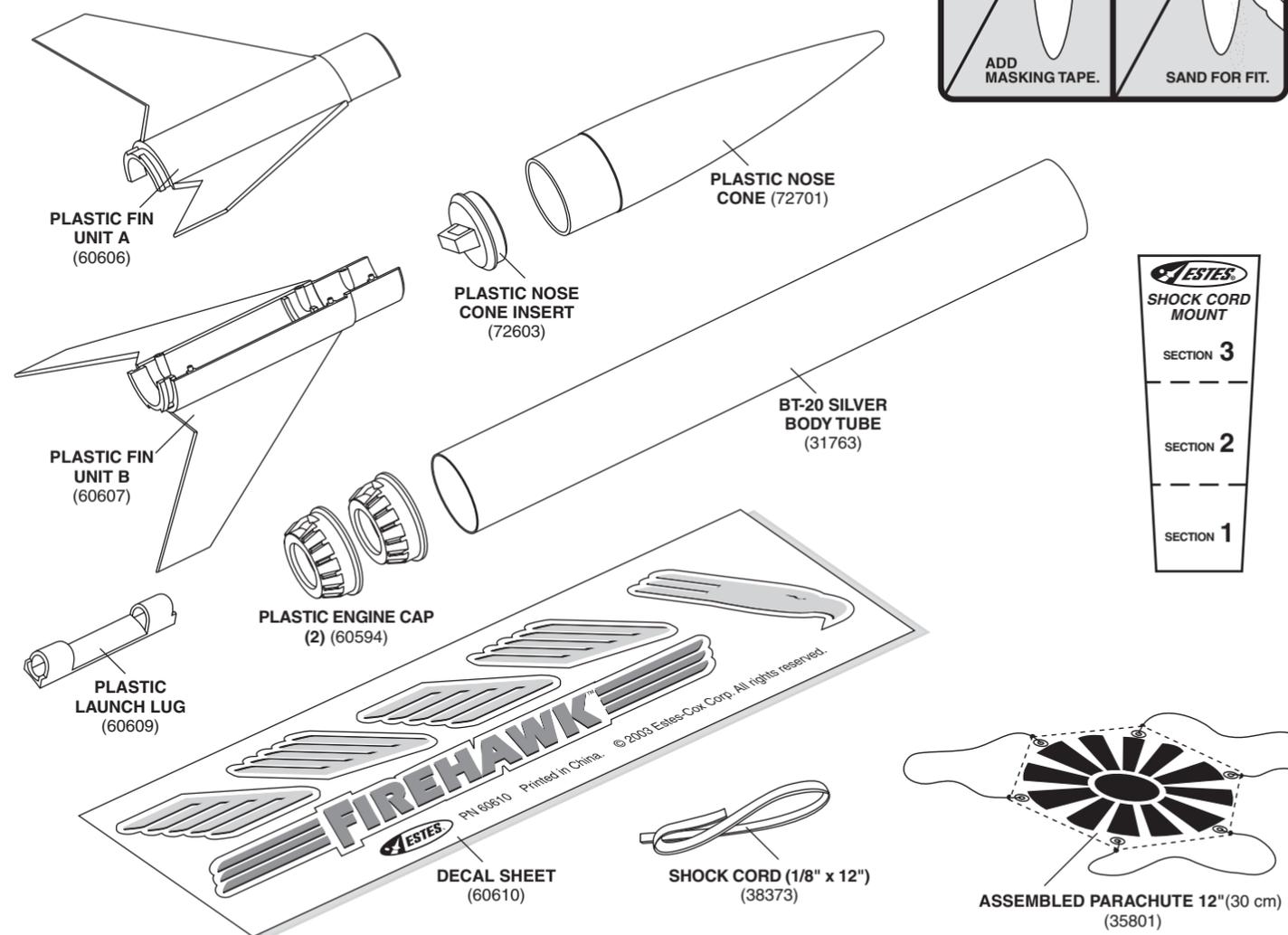
**ASSEMBLY TIP:** Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

**TEST FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE!**  
If any parts don't fit properly, sand as required for precision assembly.



## PARTS

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.



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



SCISSORS



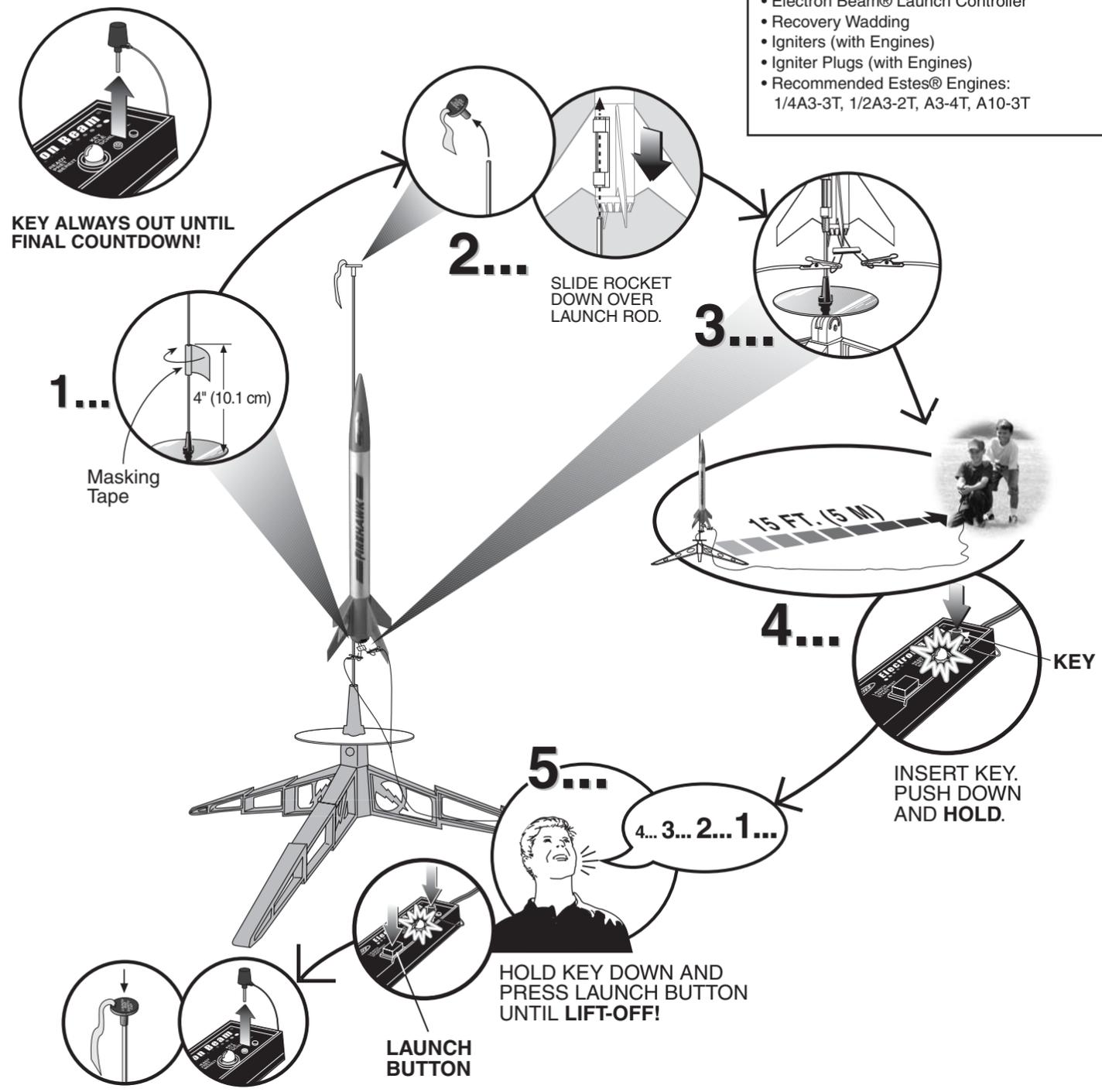
CARPENTER'S GLUE



PLASTIC CEMENT

## COUNTDOWN AND LAUNCH

- LAUNCH SUPPLIES** (Sold Separately)
- Porta Pad® II Launch Pad
  - Electron Beam® Launch Controller
  - Recovery Wadding
  - Igniters (with Engines)
  - Igniter Plugs (with Engines)
  - Recommended Estes® Engines:  
1/4A3-3T, 1/2A3-2T, A3-4T, A10-3T



## PRECAUTIONS

NAR Safety Code



NO DRY GRASS OR WEEDS

## FLYING YOUR ROCKET

Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better the 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!** Disconnect the igniter clips and remove the engine. 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.

### 1. ASSEMBLE FIN UNIT

**A.** Use plastic cement to glue Fin Unit halves together.

**B.** Hold until glue sets. Let dry.

COMPLETED FIN UNIT

### 2. ATTACH LAUNCH LUG

**A.** Apply plastic cement on underside of Launch Lug. Rotate and press Launch Lug onto tabs. Hold until glue sets. Let dry.

COMPLETED LAUNCH LUG ASSEMBLY

### 3. ATTACH BODY TUBE

**A.** Apply plastic cement inside end of body tube. Insert Fin Unit until it stops. Let dry.

**B.** Twist Engine Cap into place.

ENGINE CAP

### 4. ASSEMBLE NOSE CONE

**A.** Apply plastic cement inside nose cone and push Nose Cone Insert all the way in. Let dry.

COMPLETED NOSE CONE

### 5. ATTACH SHOCK CORD

**A.** Cut out Shock Cord Mount from FRONT PAGE.

**B.** Crease

**C.** Apply glue. Fold forward.

**D.** Apply glue. Fold forward.

**E.** Squeeze tightly and hold for one minute.

**F.** Glue mount at least 1" (25 mm) inside front of Body Tube. Hold until glue sets. Let dry.

SHOCK CORD

1 (25 mm)

NO

### 6. ATTACH PARACHUTE AND SHOCK CORD

**A.** Form loop in Shroud Lines and push through hole in Nose Cone.

**B.** Pass 'Chute through loop.

**C.** Pull tight.

**D.** Tie Shock Cord on with double knot.

### 7. APPLY DECALS

Peel decals one at a time from backing sheet and apply where shown. (Use photo on package panel for reference). Rub with finger to remove bubbles.

### PREPARE PARACHUTE FOR FLIGHT

**A.** Insert 2-3 squares of loosely crumpled recovery wadding into rocket.

**B.** Spike.

**C.** Fold.

**D.** Roll.

**E.** Wrap lines loosely. Insert 'Chute, Shock Cord and Nose Cone into Body Tube.

NOTE: Only Estes Wadding (EST 302274) Recommended.

### PREPARE ENGINE

**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 igniter before storing your engine.

**A.** Remove Engine Cap. Insert Engine.

**B.** Replace Engine Cap.

**C.** Separate Igniter and Plug.

**D.** Insert Igniter all the way into Engine.

**E.** Insert Igniter Plug.

**F.** Firmly push all the way in.

**G.** Bend Igniter Wires back as shown.

TIP MUST TOUCH PROPELLANT!