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:

1. A. ENGINE MOUNT TUBE.
   B. CUT 1/8" (3 mm) SLIT AT 1/8" (3 mm) MARK.
   C. POSITION HOOK.
   D. APPLY GLUE BAND AROUND TUBE ABOVE 1/2" (13 mm) MARK.
   E. SLIDE RETAINER RING ONTO GLUE BAND DOWN TO MARK.

2. A. DROP CLAY INTO NOSE CONE.
   B. PACK CLAY.
   C. APPLY PLASTIC CEMENT.
   D. INSERT.
   E. FINISHED

3. A. SHOCK CORD
   B. PASS SHOCK CORD THROUGH SHOCK CORD MOUNT UNTIL KNOT IS AGAINST SHOCK CORD MOUNT.
   C. DOUBLE KNOT

HELPFUL HINT: IF NOSE CONE/COUPLER FIT IS...
TOO LOOSE
ADD MASKING TAPE.
SAND FOR FIT.
TOO TIGHT
ADJUST CLAY.
SAND FOR FIT.
**FLYING YOUR ROCKET**

Choose a large field (250 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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**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.

**A.**  
ALIGN ENGINE HOOK WITH REAR SLOT IN BODY HALF A AND PLACE ENGINE MOUNT INSIDE.

**B.**  
APPLY PLASTIC CEMENT TO BODY HALF A.

**C.**  
APPLY PLASTIC CEMENT

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

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**FINISH YOUR ROCKET**

**ROCKET PREFLIGHT**

**A.**  
TIE STREAMER TO SHOCKCORD.

**B.**  
INSERT 1/4 LOOSELY CRUMPLED SQUARE OF RECOVERY WADDING.

**C.**  
FOLD STREAMER.

**D.**  
ROLL.

**E.**  
WRAP SHOCK CORD LOOSELY, INSERT STREAMER, SHOCK CORD AND NOSE CONE.

**F.**  
INSERT ENGINE.

**COUNTDOWN AND LAUNCH**

**KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!**

1... 4" (10 cm)

2... MASKING TAPE

3... 4... INSERT KEY, PUSH DOWN AND HOLD.

4... 3... 2... 1... HOLD KEY DOWN AND PRESS BUTTON UNTIL LIFT-OFF!

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**PRECAUTIONS**

NAR Safety Code

- NO DRY GRASS OR WEEDS

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