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.

- Slotted Body Tube RT-60 (1) (31189)
- Upper Body Tube BT-60 (1) (36397)
- Nose Cone NC60 (1) (72057)
- Red Tube Coupler 60C (1) (30176-6)
- Green Engine Block AR2050 (1) (30164-2)
- Engine Hook Retainer (1) (30450)
- Engine Hook (1) (35021)
- Shock Cord (1) 1/4" x 36" (38382)
- Assembled Parachute 18" (46 cm) (1) (55932)

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

- SCISSORS
- PENCIL
- RULER
- FINE SAND PAPER (#400-600 GRIT)
- CARPENTERS GLUE
- MODELING KNIFE
- MASKING TAPE
- PRIMER (WHITE)
- SPRAY PAINT: (YELLOW & CHARCOAL GRAY)
- SPRAY CLEAR COAT (OPTIONAL)
1. A. 1/2" (13 mm) ENGINE MOUNT TUBE
   B. SMEAR GLUE 2" (51 mm) INSIDE ENGINE MOUNT TUBE.
   C. INSERT GREEN ENGINE BLOCK AND YELLOW SPACER TOOL TO 1/2" (13 mm) MARK.
   D. REMOVE SPACER TOOL IMMEDIATELY.

2. A. CUT 1/8" (3 mm) SLIT AT 2 1/4" (57 mm).
   B. POSITION HOOK.
   C. TAPE ENGINE HOOK DOWN.
   D. SPREAD GLUE AROUND ENGINE MOUNT TUBE.
   E. SLIDE ENGINE HOOK RETAINER OVER TUBE TO 1/2" (13 mm) MARK. REMOVE SOME PAPER FROM INSIDE OF ADAPTER, IF NECESSARY.
   F. REMOVE TAPE.

3. A. APPLY GLUE BANDS AROUND 1/2" (13 mm) MARKS.
   B. SLIDE TUBE ADAPTERS ONTO ENGINE MOUNT TUBE UNTIL THEY SIT EVENLY AT GLUE BANDS. LET DRY.
   C. APPLY GLUE FILLETS TO BOTH SIDES OF ADAPTERS.

4. A. FINE SAND BALSA SHEET.
   B. CUT FINS FREE WITH KNIFE.
   C. STACK FINS TOGETHER AND SAND EDGES SMOOTH.
   D. SAVE SCRAP BALSA TO USE AS GLUE APPLICATOR.

5. A. INSERT ENGINE MOUNT TUBE HALFWAY INTO SLOTTED BODY TUBE.
   B. CENTER ENGINE HOOK BETWEEN FIN SLOTS.
   C. APPLY GLUE BAND 1/4" (6 mm) INSIDE SLOTTED BODY TUBE.
   D. INSERT ENGINE MOUNT TUBE UNTIL TUBE ENDS ARE EVEN.
   E. APPLY GLUE FILLETS TO BOTH ADAPTER RINGS.

TUBE ENDS EVEN
FIN SLOT
SCRAP BALSA
6. A. RED TUBE COUPLER
B. SPREAD GLUE INSIDE UPPER BODY TUBE.
C. INSERT RED TUBE COUPLER TO 3/4" (19 mm) MARK.
D. SPREAD GLUE INSIDE SLOTTED BODY TUBE.
E. INSERT RED TUBE COUPLER UNTIL BODY TUBES FIT SNUG. LET DRY.

7. A. DRAW A LAUNCH LUG (LL) LINE, ALIGNED WITH ENGINE HOOK, ENTIRE LENGTH OF ASSEMBLED TUBES.
B. CUT LAUNCH LUG INTO TWO EQUAL PIECES.
C. GLUE LAUNCH LUGS ONTO LAUNCH LUG (LL) LINE AS SHOWN.

NOTE: USE A LAUNCH ROD TO ALIGN LAUNCH LUGS.

8. A. TEST FIT FINS INTO EACH SLOT.
B. REPEAT FOR OTHER FINS.
C. ALLOW GLUE TO DRY.
D. APPLY GLUE FILLETS TO ALL LAUNCH LUG AND FIN BODY TUBE JOINTS.
E. SMOOTH WITH FINGER TIP

NOTE: FINS MUST BE ATTACHED CORRECTLY FOR A STABLE FLIGHT.

9. A. CUT OUT SHOCK CORD MOUNT FROM FRONT PAGE.
B. FOLD FORWARD.
C. FOLD FORWARD.
D. SQUEEZE TIGHTLY.
E. GLUE MOUNT INSIDE BODY TUBE. HOLD UNTIL GLUE SETS.

10. A. REMOVE EXCESS FLASH AND CLEAN THE EYELET OF NOSE CONE.
B. C. DO NOT CUT OFF EYELET OF NOSE CONE
D. DOUBLE KNOT.
PAINT SCHEME

FIRST SPRAY ROCKET WITH WHITE PRIMER, LET DRY AND SAND. REPEAT UNTIL ROCKET IS SMOOTH. FOLLOW THE PAINT SCHEME ON THE FRONT PANEL OR DESIGN YOUR OWN.

CHARCOAL
GRAY

YELLOW

DECAL

DECAL

DECAL

PEEL DECALS ONE AT A TIME FROM BACKING SHEET AND APPLY WHERE SHOWN. RUB DOWN TO REMOVE BUBBLES.

*OPTIONAL-CLEAR COAT ENTIRE ROCKET WHEN COMPLETE.

ROCKET PREFLIGHT

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

B. SPIKE

C. FOLD

D. ROLL

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

COUNTDOWN AND LAUNCH

LAUNCH SUPPLIES
(Sold Separately)

• Estes® Porta Pad® II Launch Pad
  (Requires 3/16" (5 mm) Maxi™ Rod-Sold Separately)
• Electron Beam® Controller
• Recovery Wadding
• Igniters (with Engines)
• Igniter Plugs (with Engines)
• Estes® Engines:
  C11-3, C11-5, D12-5

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.

A. TIP MUST TOUCH PROPELLANT.

B. MASKING TAPE

C. INSERT KEY. PUSH DOWN AND HOLD.

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 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.

PRECAUTIONS

NAR Safety Code

NO DRY GRASS OR WEEDS

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.