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

IMPORTANT: Your Estes product is marked with a four digit lot code or codes. The code is two digits, a space and two more digits representing the week and year of manufacture, respectively. Lot codes can be found on the product package, decal, launch controller, launch pad and/or blast deflector. Please record the lot code found on the decal and keep for future reference.
Lot code: __________

NOTE: Test fit all parts together before applying glue. If parts don’t fit properly, sand as required for precision assembly.

<table>
<thead>
<tr>
<th>Part</th>
<th>Qty.</th>
<th>Description</th>
<th>Part Number</th>
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<td>B</td>
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<tr>
<td>C</td>
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<td>D</td>
<td>1</td>
<td>Engine Block</td>
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<td>Balsa Tube Adapter</td>
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<tr>
<td>G</td>
<td>1</td>
<td>Upper Body Tube BT 20</td>
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<tr>
<td>H</td>
<td>1</td>
<td>Balsa Nose Cone</td>
<td>070228</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>Laser Cut Lower Balsa Fins</td>
<td>065978</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
<td>Laser Cut Upper Fins</td>
<td>065978</td>
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<tr>
<td>K</td>
<td>4</td>
<td>Hardwood Strips</td>
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<tr>
<td>L</td>
<td>1</td>
<td>Launch Lug</td>
<td>038190</td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td>Screw Eye</td>
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<tr>
<td>N</td>
<td>1</td>
<td>Shock Cord</td>
<td>038367</td>
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<tr>
<td>O</td>
<td>1</td>
<td>Parachute</td>
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<td>Waterslide Decals (not shown)</td>
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</table>

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

- SCISSORS
- PENCIL
- RULER
- FINE SAND PAPER (A320-440 Grit)
- CARPENTER'S GLUE
- MODELING KNIFE
- MASKING TAPE
- SPRAY PRIMER (WHITE)
- SPRAY PAINT CLEAR COAT (OPTIONAL)
- SPRAY PAINT GLOSS WHITE
- SPRAY PAINT GLOSS BLUE
- SPRAY PAINT GLOSS BLACK
FIN PREPARATION

1. Sand both sides of balsa sheet with fine sandpaper (#320 or #400 grit).
2. Cut J and J from sheet.
4. Sand leading edge round.

ENGINE MOUNT ASSEMBLY

1. Measure and mark A.
2. Cut slit at mark.
3. Insert B in slit.
4. Slide C to mark. Apply glue to both sides of C.
5. Apply glue in end of A.

TUBE MARKING

1. Cut tube marking guide from instructions.
2. Tape guide around E. Mark launch lug LL and fin lines FL. Remove guide.
3. Connect FL and LL on E. Use door frame as a straight edge. Measure and Mark LL from end of E.
LOWER FIN ATTACHMENT

1. Apply glue to root edge of I. Let dry 1 minute. Apply 2nd layer of glue.
2. Position I over FL even with end of E. Let dry. Repeat for remaining I. Check alignment using guide.

HARDWOOD STRIP ATTACHMENT

1. Sand sides of K smooth.
2. Bevel each end of K 45 degrees. Sand smooth.
3. Place mark on each K.
4. Apply glue to bottom K. Position K centered over FL with mark forward. Repeat for remaining K. Check alignment using guide.

UPPER FIN ATTACHMENT

2. Repeat for remaining J. Let fins dry. Check alignment using guide.

LAUNCH LUG ATTACHMENT

1. Sand L with fine sandpaper.
ENGINE MOUNT INSTALLATION

1. Apply glue inside of E.
2. Slide motor tube assembly even with end of E. Let dry.

UPPER BODY TUBE ASSEMBLY

1. Check fit of F in E and G. Sand as required for fit.
2. Apply ring of glue in G. Slide F into G.
4. Screw M into F.
5. Test fit H in G. Sand as required for fit.
6. Apply ring of glue in G. Slide H into G. Let dry.

SHOCK CORD MOUNT INSTALLATION

1. Cut shock cord mount from instructions.
2. Apply glue to mount. Place N on Section 2. Fold forward.
3. Apply glue and fold forward. Squeeze tight!
4. Apply glue to shock cord mount and insert in E. Hold until glue sets. Let dry.

ROCKET FINISHING

NOTE: We have found Testors One Coat Lacquer, Testors Model Master spray paints and Testors Gloss Lacquer (#1961) to be excellent for providing a long lasting and durable finish on your rocket. Always be sure to spray your models outside or in a well ventilated area.

Steps for a Quality Finish:
1. Insert shock cord into body tube and hold in place with paper.
2. Lightly sand entire rocket with fine sandpaper (#320 or #400 grit).
3. Apply glue fillets to fins and launch lug.
   a. Allow glue to dry overnight.
4. Paint the main rocket body and upper rocket tube separately. Assemble after painting is complete.
5. Use a stick inserted into the engine tube end of the rocket body for painting.
6. Hold the upper rocket section by the screw eye with a clip or pliers for painting.
7. Apply 2 light coats of white primer to upper and lower rocket sections.
   a. Lightly sand with fine sandpaper between coats.
   b. Allow to dry between each coat.
8. Spray paint tube adapter gloss white.
   a. Let paint dry overnight (24 hours is best).
9. Apply masking tape and protective cover around tube adapter.
10. Spray paint upper rocket section gloss blue.
    a. Let paint dry overnight (24 hours is best). Remove tape.
11. Apply masking tape and protective cover around nose cone and upper rocket section.
12. Spray paint nose cone gloss black.
    a. Let paint dry overnight (24 hours is best). Remove tape.

CONTINUED NEXT PAGE
ROCKET FINISHING CONTINUED

13. Spray paint main rocket body gloss white.
   a. Let paint dry overnight (24 hours is best).
14. Apply masking tape between fins and protective cover over lower rocket section.
15. Spray fins gloss black.
   a. Let paint dry overnight (24 hours is best). Remove tape and cover.
16. Apply waterslide decals where shown.
   a. Cut decals to be applied from decal sheet, trimming close to the decal edge.
   b. Place decal in bowl of warm water until decal begins to curl.
   c. Remove decal, position in place and slide decal off of backing material and onto the model as close to final position as possible.
   d. Gently blot out excess water with a clean paper towel.
17. Allow decals to set overnight before applying protective clear coat. This will provide added protection and shine to your Ricochet™ rocket!

RECOVERY SYSTEM ATTACHMENT

1. Form loop with shroud lines.
2. Insert loop through M.
3. Pass Q through loop.
4. Pull lines tight.
5. Tie N to M with double knot.

PREPARE FLIGHT RECOVERY

NOTE: Only Estes Recovery Wadding (302274) recommended.

1. Pull shock cord taut when inserting recovery wadding.
2. Insert 3 - 4 loosely crumpled squares recovery wadding. Push below shock cord attachment.
3. Spike.
4. Fold.
5. Roll.

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

PREPARE ENGINE

WARNING: FLAMMABLE
To avoid serious injury, read instructions & NAR Safety Code included with engines.
PREPARE 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 engine.

1. Separate igniter and igniter plug.
2. Insert igniter.
3. Insert plug.
4. Push down firmly.
5. Gently bend igniters to form leads as shown.
6. Wrap lines loosely around the parachute. Insert parachute, shock cord and nose cone into body tube.
6. Insert engine into rocket.
COUNTDOWN AND LAUNCH

KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

1...
Masking Tape

Estes Launch Supplies Needed:
(Sold Separately)
Porta Pad™ Launch Pad
Electron Beam® Launch Controller
Recovery Wadding (302274)
Igniters (with engines)
Igniter Plugs (with engines)
Recommended Estes Engines:
A8-3 (First Flight),
B6-4, C6-5

2...

3...

4...
15 FT. (4.6 M)

5...
INSERT KEY. PUSH DOWN HARD. BULB WILL LIGHT.
WHILE HOLDING KEY DOWN FIRMLY, PRESS LAUNCH BUTTON UNTIL LIFT-OFF!

PRECAUTIONS

This Paper
NAR Safety Code
Can Be Recycled

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. Repair any damage before launching the rocket.

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 enclosed 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 theigniter 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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<th>Number</th>
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* Diecut part number

*Part number 35815 listed in the plan indicates an 18" parachute however catalog specs and sister kit indicate 35801 which is a 12" parachute. I am considering 35815 as a typo since 18" is way too large for this size rocket.
RICOCHET
FLYING MODEL ROCKET KIT

- Simple to Glue and Paint!
- Air to Air Missile Styling!

FLIES UP TO 1125 FEET (344 m)
22 INCHES (56 cm) TALL!

1 MODEL KIT 1 MODELE REDUIT
RICOCHET
FLYING MODEL ROCKET KIT

- High Quality Balsa Nose Cone!
- Waterslide Decals!
- Laser Cut Balsa Fins!

FLIES UP TO
1125 FEET
(342 M)

22 INCHES
(55.9 cm)
TALL!