BULLPUP 12D
FLYING MODEL ROCKET KIT INSTRUCTIONS
KEEP FOR FUTURE REFERENCE

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.

HOW TO USE THESE INSTRUCTIONS:
READ ALL INSTRUCTIONS BEFORE STARTING WORK ON THIS MODEL.

A. Read each step first and visualize the procedure thoroughly in your mind before starting construction.
B. Lay the parts out on the table in front of you. (Check inside tubes for any small parts.)
C. Use the parts layout to match all parts contained in kit.
D. Collect all construction supplies that are not included in this kit.
E. Sand parts as necessary for proper fit.
F. The construction supplies required for each step are listed at the beginning of each step.
G. Check off each step as you complete it.

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.

FLYING YOUR ROCKET
Choose a large field (500 ft. [152 m] square) free of dry woods 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.

PRECAUTIONS
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 into place. Repeat the steps under Countdown and Launch.

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ROCKET ASSEMBLY

1. A. Remove centering rings from die-cut sheet. Slide over Engine Mount Tube as shown.
   B. Apply glue to both sides of both rings/tube joints.
   C. Mark yellow spacer tube 6 mm (1/4") from one end. Using a piece of scrap balsa, smear glue 51 mm (2") inside engine mount tube.
   D. Insert green engine block into rear of tube. Insert spacer tube and push engine block into tube until 1/4" (6 mm) mark is even with end of tube. NOTE: The yellow spacer tube is a tool and must be removed as soon as you match the mark with the end of the engine mount tube. Don’t accidentally glue it to the rear of the tube.

2. A. Locate the plastic tail cone.
   B. Cut the excess plastic parts off as indicated in diagram and discard.
   C. Sand front and rear of tail cone flat and remove any excess plastic with modeling knife.

   B. Stack fins together. Sand all edges smooth.
   C. Using a piece of scrap balsa, smear glue 51 mm (2") inside tube 2" (51 mm) from one end.
   D. Slide engine mount into body tube until both rings are inside tube. Push tail cone (no glue yet) over Engine Mount Tube until snug against Body Tube.
   E. Mark tube at arrows. Label Launch Lug Line ‘LL’.
   F. Remove guide. Wrap guide around the Body Tube and tape.
   G. Remove tail cone. Apply plastic cement to tail cone as shown and push tail cone back into place.
   H. Using door frame, extend all lines the full length of tube.
   I. Apply glue to both sides of both ring/tube joints.
   J. Remove centering rings from die-cut sheet. Carefully remove fins by freeing edges with sharp knife.
   K. Stack fins together. Sand all edges smooth.
   L. Do not set rocket on fins while glue is wet. FINS MUST BE ATTACHED CORRECTLY FOR STABLE FLIGHT!

4. A. Trim excess plastic from around sides of nose cone with sharp knife. Remove any excess plastic from inside molded eyelet. Enlarge hole in rear of nose cone.
   B. Roll clay into a “snake” about 3 mm (1/8") diameter. Place clay tightly. Use all of the clay.
   C. Cut out shock cord mount located on page one of the instructions.
   D. Crease on dotted lines by folding. Spread glue on section 2 and lay end of shock cord into glue. Fold over section 1 and apply glue to section 3. Fold forward again.
   E. Clamp unit together with fingers until glue sets.

5. A. Form loop in shroud lines through eyelet. Wrap guide around the Body Tube and tape.
   B. Glue launch lug straight on launch lug line with its rear edge 73 mm (2-7/8") from rear of tube.
   C. Hold until glue sets.

6. A. Apply a glue reinforcement to each fin/body tube joint and each side of launch lug. Smooth with finger.
   B. Support rocket as shown until glue dries.

7. A. Apply glue to shock cord mount.
   B. Press mount into body tube about 25 mm (1") in from end of tube to allow for the nose cone.
   C. Hold until glue sets.

8. A. Apply a glue reinforcement to each fin/body tube joint and each side of launch lug. Smooth with finger.
   B. Support rocket as shown until glue dries.

9. A. Form loop in shroud lines through eyelet. Wrap guide around the Body Tube and tape.
   B. Glue launch lug straight on launch lug line with its rear edge 73 mm (2-7/8") from rear of tube.
   C. Hold until glue sets.

10. A. Glue launch lug straight on launch lug line with its rear edge 73 mm (2-7/8") from rear of tube.
    B. Press mount into body tube about 25 mm (1") in from end of tube to allow for the nose cone.
    C. Hold until glue sets.

11. A. Trim excess plastic from around sides of nose cone with sharp knife. Remove any excess plastic from inside molded eyelet. Enlarge hole in rear of nose cone.
    B. Roll clay into a “snake” about 3 mm (1/8") diameter. Place clay tightly. Use all of the clay.
    C. Wipe nose cone with damp cloth to remove oil and dirt.

12. A. Attach shock cord and to protect decals, spray a flat clear coat on the rocket.
    B. Apply a glue reinforcement to each fin/body tube joint and each side of launch lug. Smooth with finger.
    C. Support rocket as shown until glue dries.

FINISHING YOUR ROCKET

Apply sanding sealer to fins. When sealer is dry, lightly sand parts. Repeat sanding and sealing until balsa grain lines are filled. Optional: Spray a light coat of automotive primer over entire rocket. Lightly sand (600 grit) when primer is dry. This allows the paint to adhere better and gives a smoother finish. For a more realistic appearance and to protect decals, spray a flat clear coat on the rocket.