Art Applewhite Rockets

from deep in the heart of Texas

38mm Stealth Rocket Assembly Instructions

Height – 10 inches (25cm) Span – 12.5 inches (32cm) Weight – 3.9 oz (109gm)

Parts List

3 SIDEs & BOTTOM – Foam-backed Board MOTOR MOUNT – 4" x 38mm LOC Motor Mount tube FORWARD BULKHEAD - Matte board

Recommended motors:

Ellis Mountain H48, Cesaroni Pro38, 1 & 2 grain motors, Aerotech H45 single use and H73J, H123W, H148R (Aerotech RMS 38/240 reloads).

Tools and supplies needed

#11 Exacto® knife, Metal ruler, Elmer's Glue-All®, 220 grit sandpaper, 5 minute epoxy

Please make sure all the parts are present. Contact rocket877@aol.com immediately if any parts are missing or damaged.

<u>Tips:</u>

- Read through the entire instructions before beginning
- Use a new Exacto® knife blade.
- Test fit all parts before gluing them.
- Work on a clean surface, in a well-lighted area.

<u>Assembly</u>

- 1. Make the beveled cuts using a metal ruler as a guide. Make a shallow, angled cut along one of the long, straight lines on one SIDE. Cut only the paper and not into the foam.
- 2. Make a second deeper cut, through the first cut, at a 45-degree angle to the surface of the foamboard. Lightly sand the beveled edge as necessary to make it sharp and straight.
- 3. Repeat for all the beveled cuts.
- 4. Cut out the 4 small triangles from the outside edge of each the SIDEs.
- 5. On the SIDE marked with Launch Rod Holes, carefully cut out the inside and outside holes. Cut only through the paper and not into the foam. Peel the paper out of the hole.
- 6. Poke through the INSIDE LAUNCH ROD HOLE to the OUTSIDE LAUNCH ROD HOLE with a toothpick. The toothpick should go through the foam board at an angle. Carefully enlarge the hole until a 1/4" launch rod passes through it smoothly.









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- Glue together two of the SIDES along their beveled edges with white glue. Make sure they are at a 90-degree angle to each other and their edges are even.
- 8. Glue the remaining SIDE to the other two along their beveled edges.
- 9. Make fillets of white glue or epoxy along the full length of the inside joints. Let the SIDES (TOP) rest point down until the glue dries. Repeat as necessary to make a sturdy fillet.
- 10. With the TOP still pointing down, fill the inside of the tip with epoxy almost up to the launch rod hole.
- 11. Glue the FORWARD BULKHEAD to the end of the MOTOR MOUNT with white glue. Make a fillet of glue or epoxy around the joint.
- 12. Trim the corners of the FORWARD BULKHEAD so it fits snugly into the inside of the TOP.
- 13. With a #11 Exacto® knife, cut out the Motor Mount Hole and Launch Rod Notch from the center of the BOTTOM. Make the cut as neatly as possible.
- 14. Test fit the MOTOR MOUNT into the BOTTOM. Adjust the hole with sandpaper for a snug fit but do not use too much force. Note: The hole is intentionally marked slightly undersized to allow for adjustments.
- 15. Place the BOTTOM inside the TOP so that the BOTTOM makes contact with all the SIDES. Trim the corners of the BOTTOM if the fillets in the TOP prevent a good fit.
- 16. Test fit the MOTOR MOUNT into the BOTTOM, then test fit them together into the TOP. All the edges should rest against the SIDES without gaps.
- 17. Insert the MOTOR MOUNT into the TOP and run a fillet of glue or epoxy around the edges. Immediately slide the BOTTOM over the MOTOR MOUNT with the Launch Rod Holes lined up and the MOTOR MOUNT is as far forward as it can go.
- 18. Run a fillet of white glue alone all three edges of the BOTTOM where it contacts the TOP. Build up a sturdy fillet with white glue or epoxy.
- 19. Run a fillet of white glue or epoxy along the joint between the MOTOR MOUNT and the BOTTOM.
- 20. Spread a thin layer white glue on all the exposed foam edges to protect the foam from solvents and heat.
- 21. Check the clearances of the Launch Rod Holes by running a launch rod from the BOTTOM to the TOP through the Launch Rod Holes. The rocket should slide easily on the rod.













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Launch Preparation:

<u>Recommended motors:</u> Ellis Mountain H48, Cesaroni Pro38, 1 & 2 grain motors, Aerotech H45 single use and H73J, H123W, H148R (Aerotech RMS 38/240 reloads).

Remove the ejection charge from single use motors by removing the paper cap from the forward end and dumping out the Black Powder. Put tape over the hole at the forward end of the motor to prevent hot gasses from escaping when the motor burns out. Using a motor with an ejection charge in place will damage the rocket and may cause the motor to be ejected.

- The forward closure of RMS motors should be plugged with recovery wadding and masking tape. The black powder ejection charge should NOT be installed.
- Friction fit the motor into the MOTOR MOUNT. A tight fit is not necessary.
- The motor should be installed as far forward as possible. The motor should not stick out below the bottom edges of the rocket.
- To avoid damage from the motor exhaust, support the rocket at least 12 inches above the blast deflector.

Limitation of Liability: Model rockets are not toys. Model rockets are functional rockets constructed of lightweight materials and launched using pre-manufactured, NAR safety certified model rocket motors in accordance with the NAR Model Rocket Safety Code. Model rockets, if misused, can cause injury, property damage and even death. Art Applewhite Rockets certifies that it has exercised reasonable care in the design and manufacture of its products. Once sold, we cannot assume any liability for product storage, transportation or usage. Art Applewhite Rockets shall not be held responsible for any property damage or personal injury whatsoever arising from the handling, storage, use or misuse of our product. The buyer assumes all risks and liabilities there from and accepts and uses Art Applewhite Rockets products on these conditions.