Art Applewhite Rockets from deep in the heart of Texas

24mm Delta Flying Saucer Assembly Instructions

Diameter – 6 inches (15cm) Height – 2.75 inches (7cm) Weight – 0.8 oz (21gm)

Parts List

Top & Bottom – Cardstock Center – Foam-backed Board 2.75"-24mm Motor Mount

Recommended motors:

C11-0, C11-3, D11-P, D12-0, D12-3, E9-P, E9-4, Ellis Mountain E10, F23, G37, Aerotech 24mm single use motors & RMS 24/40 reloads, Microhybrid motor

Tools and supplies needed

Scissors, #11 Exacto® knife, Elmer's Glue-All®, 220 grit sandpaper

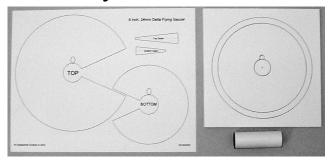
Please read through the entire instructions before beginning. Make sure all the parts in the above list are present. Contact rocket877@aol.com if any parts are missing or damaged.

Tips:

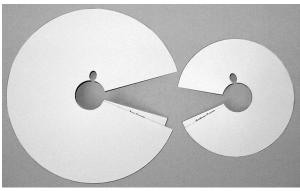
- Use a new #11 Exacto® knife blade.
- Don't use too much glue
- Work on a clean surface, in a well-lighted area.
- Cut on or just inside the lines.
- Make straight cuts with a metal ruler and a #11 Exacto® knife
- Thin CA soaked into the ends of the tubes and sanded smooth will improve their durability.

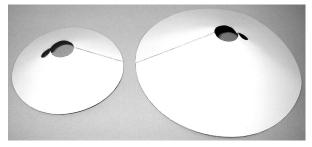
Assembly

- Cut out the TOP and TOP SEAM with a good pair of scissors or a #11 Exacto knife. Cut right on the lines. The lines are intentionally thin so the cuts will be accurate.
- Put a small amount of glue on half the TOP SEAMS and spread it out. Glue TOP SEAM to the underside of the TOP.
- 3. Put a small amount of glue on the other half of the TOP SEAM. Form the TOP into a shallow cone with the TOP SEAM on the underside.
- 4. Repeat the above steps for the BOTTOM.









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- 5. Cut out the CENTER using a new #11 Exacto® knife. Do not try to cut all the way through the first time around. Make a shallow cut through the first layer of posterboard, then go back and cut all the way through. Be sure to make the cut perpendicular with the surface of the CENTER. There will be a tendency for the knife to cut at an angle.
- 6. Cut out the motor mount hole in the CENTER. On the first pass let the knife angle towards the middle to make the cut easier. On the second pass cut all the way through.





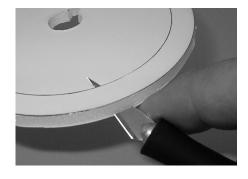


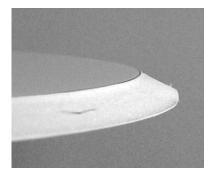


7. Once you remove the plug of foam from the CENTER, go back and trim the hole to make it smooth and perpendicular to the surface of the CENTER. Wrap a single layer of sandpaper around an old 24mm motor casing and lightly sand the motor mount hole to shape and size. Check to make sure the MOTOR MOUNT fits smoothly and snugly.



- 8. Make a shallow cut, sharply angled toward the outside edge, on the remaining ink line on the CENTER.
- 9. Cut the foam at an angle from the CENTER's bottom outside edge to the cut just made. This will form a 30 degree beveled edge. Sand the edge smooth and round.
- 10. Cut a 1/4" rounded notch from the motor mount hole of the CENTER for the launch rod.
- 11. Draw a straight pencil line down the length of the MOTOR MOUNT to aid in lining up the launch rod holes.





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- 12. Spread glue around the exposed foam on the outside edge of the CENTER and place the TOP on the CENTER with the <u>launch rod hole lined up with the notch</u>. Make sure the TOP is in contact with the CENTER with no gaps until the glue dries.
- 13. Spread glue on the inside of the motor mount hole of the CENTER and the end of the MOTOR MOUNT. Insert the MOTOR MOUNT into the back of the CENTER and slide it up until it is even with the hole in the TOP. Wipe away any excess glue.
- 14. Make a fillet of glue around the joint between the bottom of the CENTER and the MOTOR MOUNT.
- 15. Spread glue on the inside edges of the BOTTOM. Slide the BOTTOM over the MOTOR MOUNT and down until it make contact all the way around with the CENTER. **Be** sure to line up the launch rod holes.
- 16. Make a fillet of glue around the joints between the BOTTOM and MOTOR MOUNT and the BOTTOM and CENTER.
- 17. Optional: If you are <u>not</u> going to use motors than 2.75" long, cut out the ENGINE BLOCK and curl it into a tight coil. Glue it into the inside of the MOTOR MOUNT, flush with the top.
- 18. Once the glue dries, you may paint the rocket. If you do not paint the rocket, you should at least spray on a coat of clear enamel or lacquer to protect the cardstock and glue from moisture. Note: The mirror Gold version does not need a clear overcoat.

Launch Preparation:

Recommended motors: C11-0, C11-3, D11-P, D12-0, D12-3, E9-P, E9-4, Ellis Mountain E10, F23, G37, Aerotech 24mm single use motors & RMS 24/40 reloads, Microhybrid motor

- Friction fit the motor into the MOTOR MOUNT. A tight fit is not necessary. If the motor does not have a thrust ring at the base of its casing, tightly wrap 3 layers of masking tape 1/4" to 1/2" wide around the base of the motor to act as a thrust ring.
- The motor should not stick out more than ½" inch below the MOTOR MOUNT. It's okay if the motor sticks out the top of the MOTOR MOUNT.
- If using an Aerotech single use motor, remove the paper cap from the forward end and safely
 dispose of the black power ejection charge. If using a RMS motor do not install the ejection charge
 in the motor.
- To avoid damage from the motor exhaust, support the saucer at least 6 inches above the blast deflector with a clothespin.
- Use caution when launching in winds greater than 10 mph (16km/h) because these rockets are over-stable have a strong tendency to weathercock (point directly into the wind).

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.

