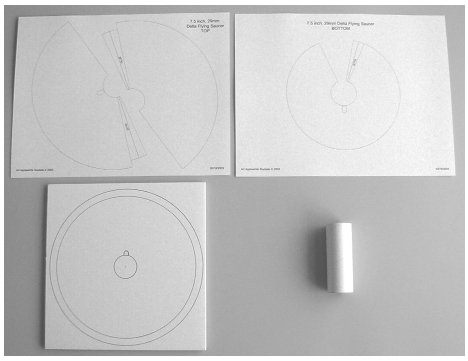
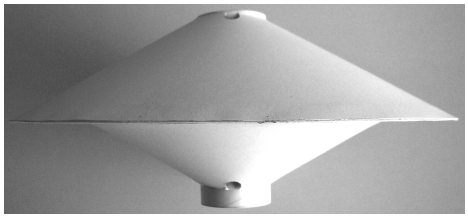
Art Applewhite Rockets

from deep in the heart of Texas

29mm Delta Flying Saucer Assembly Instructions

Diameter – 7.5 inches (19cm)
Height – 3.25 inches (8.25cm)
Weight – 1.2 oz (34gm)





Parts List
Top – Cardstock
Bottom – Cardstock
Center – Foam-backed Board
3.25”-29mm Motor Mount

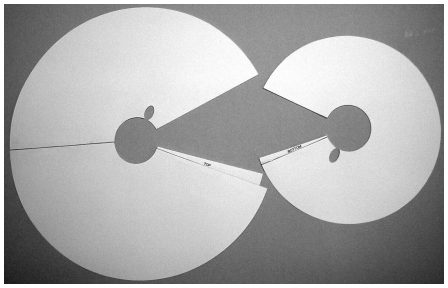
Recommended motors: All Roadrunner motors, Ellis Mountain G20, G35, H50 & H101, Aerotech 29mm single use motors or RMS 29/40-120 reloads

Tools and supplies needed
Scissors, #11 Exacto knife, Elmer’s Glue-All®(White glue), 220 grit sandpaper, Devcon 2-Ton Epoxy (Walmart $1.97) **Do not substitute**

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

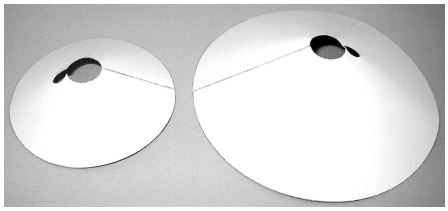
Tips:

- Use a **new** #11 Exacto® blade.
- Don’t use too much glue
- Test fit all parts before gluing.
- Use the glue specified, do not substitute yellow carpenter's glue for white glue.
- Work on a clean surface, in a well-lighted area.
- Cut on the lines.
- Make straight cuts with a metal ruler and a #11 Exacto® knife



Assembly:

1. Cut out the TOP and TOP SEAM. The lines are intentionally thin so the cuts will be accurate.
2. Put a small amount of white 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 white 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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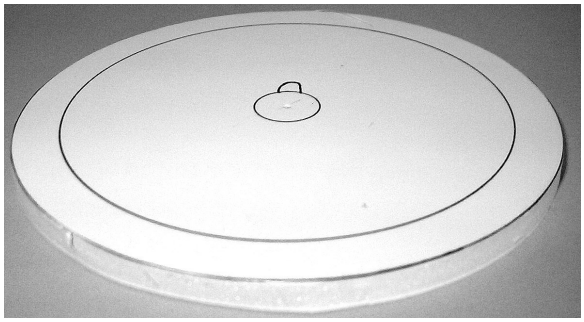
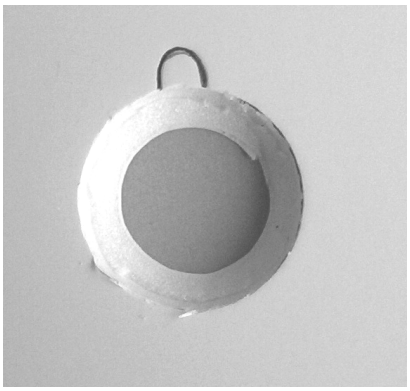
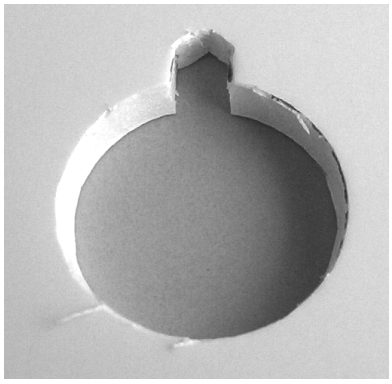


5. Cut out the CENTER using a new #11 Exacto knife. Do not try to cut all the way through on the first pass.. Make a shallow cut through the first layer of posterboard, then go back and cut all the way through. Be sure to make the final cut perpendicular with the surface of the CENTER. There will be 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 a little to make the cut easier. On the second pass cut all the way through.

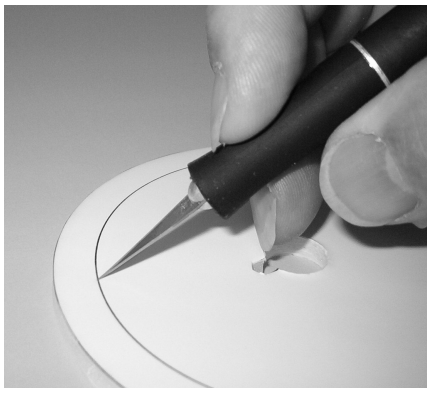
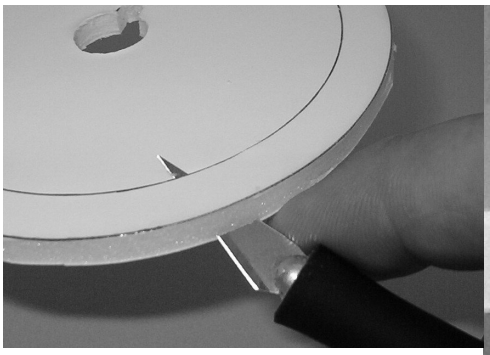
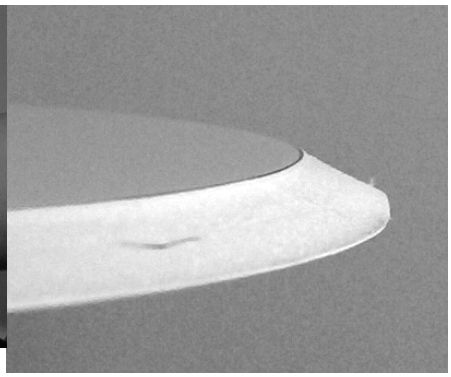




7. Once you remove the plug of foam from the CENTER, go back and trim the hole to make it smooth and perpendicular to the surface of the CENTER. Wrap a layer of sandpaper around an old 24mm motor casing and lightly sand the motor mount hole to shape and size. Check to make sure the MOTOR MOUNT fits smoothly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

Perform the next 2 steps slowly and carefully.

9. Make a shallow cut, angled toward the outside edge, on the remaining ink line on the CENTER.
10. Cut the foam from the CENTER's bottom outside edge to the line on top of the CENTER. This will form a 30 degree beveled edge.
11. Draw a pencil line down the full length of the MOTOR MOUNT to aid in lining up the Launch Rod Holes.

12. **Note: The next 3 step should be done quickly, in the order specified, while the glue or epoxy has set. Do not begin until you have all the materials ready and you have test fitted all the parts.**

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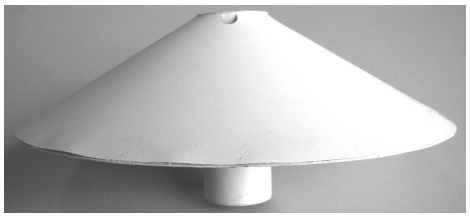

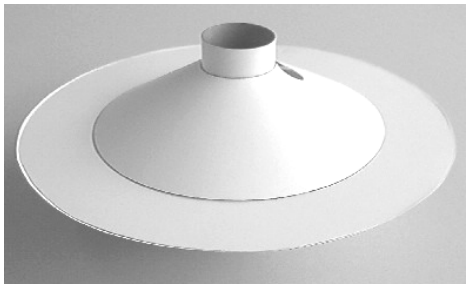

13. For flights with a G80 motors and above, spread a very thin layer of Devcon, 2 Ton epoxy on the entire inside surface of the TOP. In the next 2 steps use the epoxy instead of white glue.
14. Spread white glue around the exposed foam on the outside edge of the CENTER. Place the TOP on the CENTER. **Make sure the launch rod hole in the TOP lines up with the launch rod notch in the CENTER.** Make sure the TOP is in contact with the CENTER with no gaps until the glue dries. Resting the TOP, inverted, in a small bowl with some light weights on the CENTER will make this easier.
15. Spread white glue on 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.
16. Make a fillet of white glue around the joint between the CENTER and the MOTOR MOUNT. After the glue dries, make another glue fillet around the joint between the TOP and the MOTOR MOUNT.
17. Spread white 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. **Note: be sure to line up the launch rod holes**.
18. Make a fillet of white glue around the joints between the BOTTOM and MOTOR MOUNT and the BOTTOM and CENTER.
19. 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:

- 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 1/2" masking tape 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 a single use motor is used, remove the paper cap from the forward end and safely dispose of the black power ejection charge. Cover the hole with a small amount of flameproof wadding and masking tape.
- For a RMS motor do not install the ejection charge and cover the ejection hole in the forward closure as above.
- 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 have a strong tendency to weathercock (point directly into the wind).