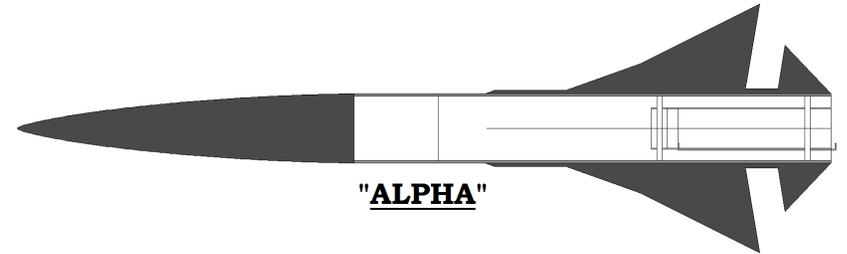


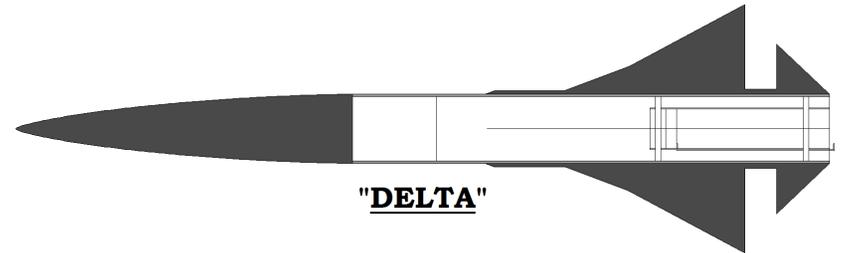
More Notes

3D ROCKETRY

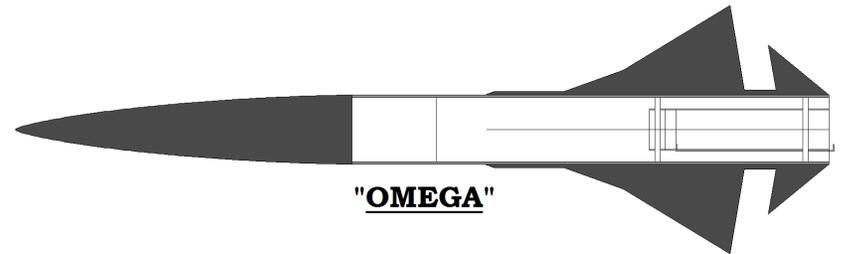
S.A.M. Interceptor 38mm Series Instructions



"ALPHA"



"DELTA"



"OMEGA"

S.A.M. Interceptor 38MM Parts List

- | | |
|-------------------------------|---------------------------------|
| 1- 8" Plastic Nose Cone | 1- 1/4" x 2" Launch Lug |
| 1- 11.3" X 38mm HW Body Tube | 1- 15" Mylar Parachute Kit |
| 1- 4.25" X 24mm HW Motor Tube | 4- Basswood Strips |
| 1- 3-3/4" Engine Hook | 1- 2' x 1/4" Elastic Shock Cord |
| 1- 1/4" Engine Block | 1- 1' Kevlar Cord |
| 4- 1/8" Plywood Fins | 1- 1" E to D Engine Spacer |
| 2- 1/8" Plywood Center Rings | |

3D Rocketry, Statement of Limitation of Liability

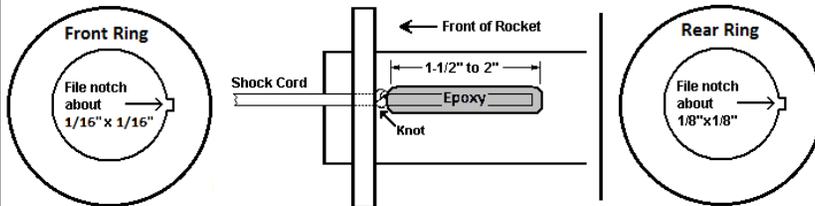
Limitation of Liability: Model rockets are not toys. Model rockets are functional rockets constructed of lightweight materials and launched using pre-manufactured, NAR safety certified model rocket motors in accordance with the NAR Model Rocket Safety Code. Model rockets, if misused, can cause injury, property damage and even death. 3D Rocketry 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. 3D Rocketry 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 3D Rocketry products on these conditions.

3D ROCKETRY

Step 1

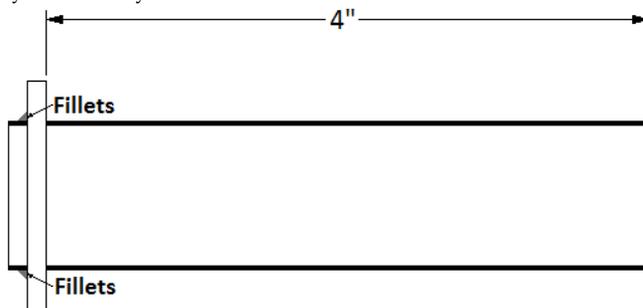
File a 1/16 in. X 1/16 in. notch in one of the centering rings as shown. Tie a large knot about 1-3/4 in to 2-1/4 in. from the end of the shock cord. The knot should be larger than the ring notch to keep cord from pulling through the ring notch. Place the front centering ring in position. (See step 2)

Do not glue ring onto motor tube yet. Glue 1-1/2 in. to 2 in. of the shock cord end to the motor tube as shown. (Tip: 5 min Epoxy works best) Set aside to dry. File a 1/8 in. X 1/8 in. notch in rear centering ring for the motor hook as shown. **Skip rear ring notch if using a threaded retainer.**



Step 2

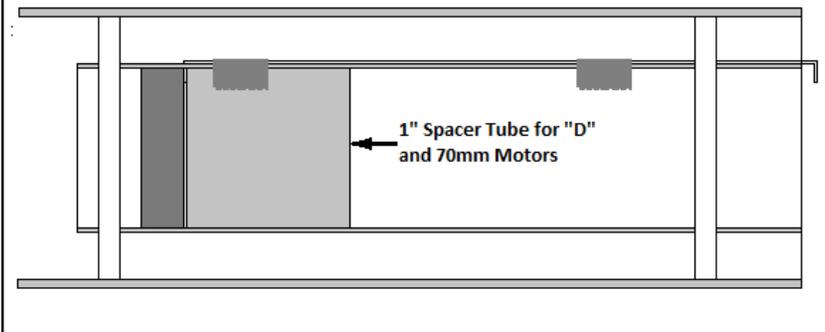
Sand entire motor tube with medium sand paper to improve glue adhesion. Glue forward centering ring to motor tube 4 in. from bottom of tube as shown. Be sure to pull shock cord through forward centering ring notch before gluing. **If your doing internal fillets do not glue rear centering ring to motor tube yet.** Apply a few layers of fillet glue at the top of forward ring as shown. Do not apply fillets on the inside of ring as they will interfere with fin tabs. Set assembly aside to dry.



3D ROCKETRY

Step 11

The 1" long spacer tube is provided to use 70MM long motors. ("D" single use motors.) **The spacer tube must move freely inside the 24mm motor tube when it is being used!!**



NOTES:

Recommended Engines

(Estes) D12-5, E12- 6 and E9-6

(Aerotech) D9-5, D15-4, E30-7, E11-7, E15-7,
F12-5, E28-6, F12-6 and F24-7.

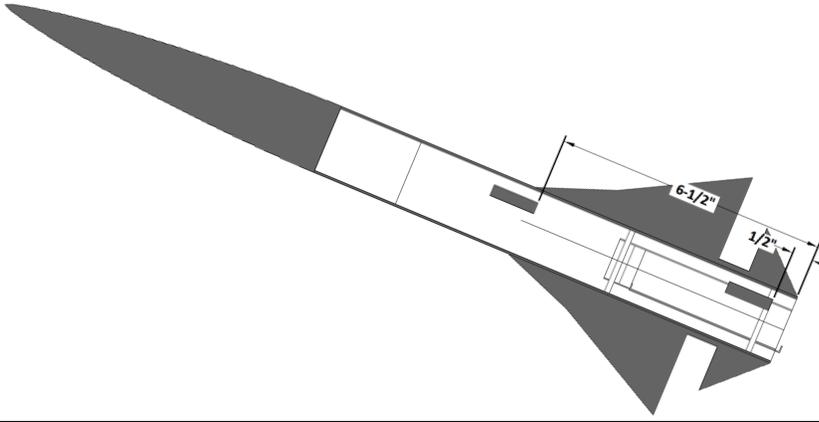
Predicted Altitudes

500 Feet to 2,000 Feet

3D ROCKETRY

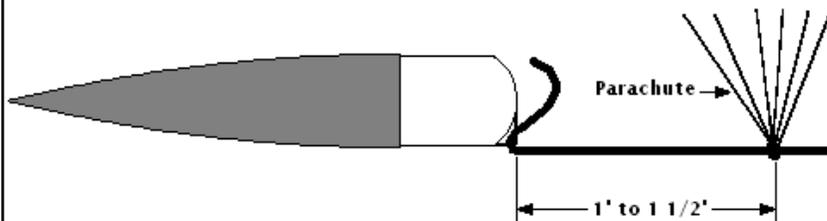
Step 9

Launch lug type and placement can be changed to the builders preference. The 1/4 in. launch lugs placement is generally near the center of gravity and near the rear of model.



Step 10

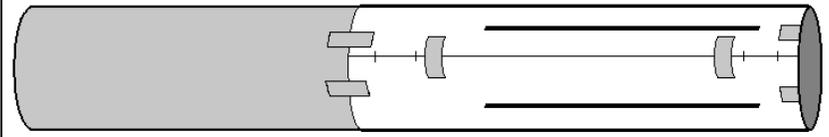
Tie parachute and nosecone as shown. Snap swivels can be used instead of tying directly to nose cone and parachute, this method makes removal much easier and chute can be used in another rocket. The nose cone and parachute connecting positions can be reversed per your preference. (TIP: A #5 snap swivel works nicely.)



3D ROCKETRY

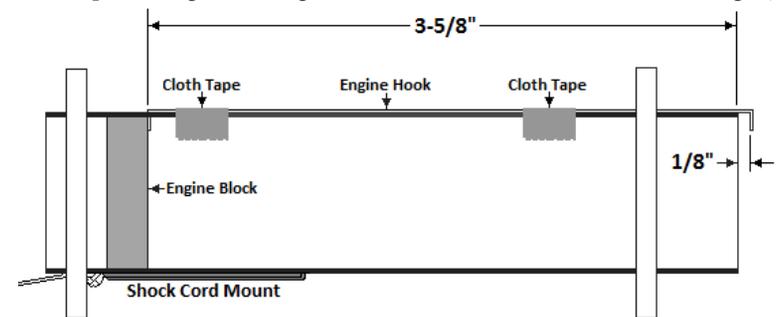
Step 3

Cut out fin slot template. Tape slot template around body tube lining it up with the small guide lines at sides of template and end of body tube. Next tape down fin template at the end of tube and at top of fin template. The slots can be cut out a couple of different ways. 1) Trace slots with pencil or poke holes at each corner point and carefully cut out slots with a hobby knife freehand or with a straight edge. 2) trace slots and cut slots using a dremel type tool. After cutting slots sand or trim slots so fins slide through easily but snugly. (TIP: Freehand cutting with a sharp hobby knife cuts tube easily.)



Step 4

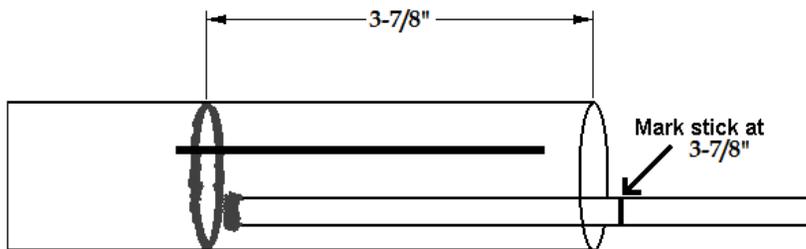
(Skip this step if you are only using Aerotech motor systems with a retainer.) On the opposite side of the shock cord mount cut a small 1/8" slit in the motor tube 3-5/8 in. from rear of motor tube leaving 1/8 in. of engine hook overhanging. Apply a strong tape on motor hook holding the motor hook in place as shown. Cut tape short enough to not interfere with the gluing of the fins to the motor tube. Glue engine block in motor tube up to the engine hook as shown. (TIP: Duck tape or Gorilla tape works great for engine hook attachment then CA around the edges.)



3D ROCKETRY

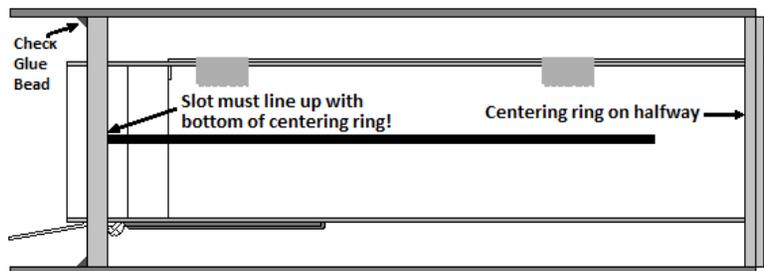
Step 5

Find a scrap piece of stick that's about 8 to 10 in. long and mark the scrap piece at 3-7/8 in. Apply a generous ring of glue inside the main body tube at the 3-7/8 in. mark as shown.



Step 6

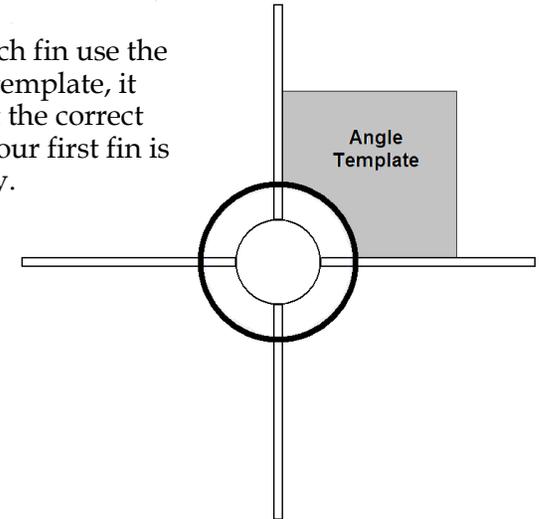
Insert the dry motor tube assembly into the main tube until the bottom of the top centering ring lines up with the fin slot. Insert rear centering ring halfway into rear of body tube to enable removal and align motor mount. **If your doing internal fillets rear ring is glued on after Step 8.** Stand up the completed assembly with the motor tube end down until the glue dries. Look with flash light and check to make sure you have a good bead of glue around the top of the centering ring.



3D ROCKETRY

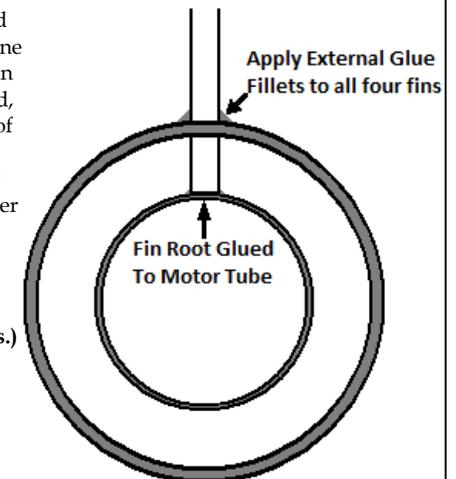
Step 7

When gluing each fin use the supplied angle template, it keeps the fins at the correct angle. Be sure your first fin is aligned properly.



Step 8

Insert rear centering ring halfway into rear of body tube to enable removal and align motor mount. Glue fins in place one at a time and align fins with supplied fin guide. After all four fin roots have dried, apply basswood trim and a few layers of fillets along the body tube of all of the fins as shown. Allow each layer of fillet to dry before reapplying. Use your finger or a small rounded tip stick to smooth out the fillets. Fillets greatly strengthen bonding of the fins to the main body tube. (TIP: Titebond II or Elmer's Carpenter's glue works great for fillets.)



Glue rear centering ring to rear end of fins and body tube when the fins are dry.