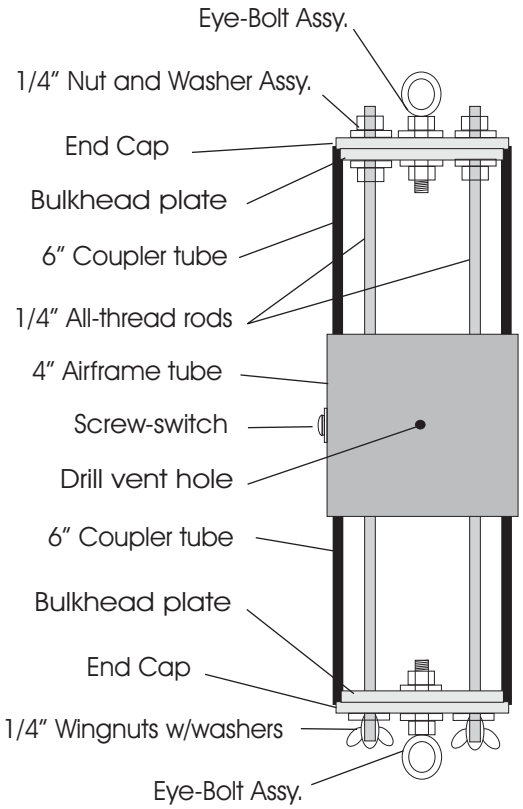
BINDER DESIGN 4.0” AVIONICS BAY KIT

A full 12” long for mounting of altimeters, timers, transmitters etc. Features a 4” long section of airframe for mounting of switches and provides the perfect place for drilling of vent holes. Stepped end-caps minimize the chance of ejection gas leakage into the bay interior. Comes complete with screw-switch for remote arming!

PARTS LIST:

2 - 6” long airframe couplers
1 - 4” long section of 4.0” airframe
2 - drilled end caps
2 - drilled bulkhead plates
2 - all-thread sections
2 - eye-bolts
8 - 1/4” nuts
10 - washers
4 - wing-nuts
1 - screw switch with arming decal

CUT AWAY VIEW



NOTICE TO BUYER...This kit is not a toy! It is not recommended for children under age 18, unless used under adult supervision. If not assembled and used properly, it could cause property damage, personal injury, or death. By purchasing this kit, the buyer agrees that Binder Design nor the designer of this kit is not responsible for damage occurring through the use of the product and shall be held harmless in any such claims. If the buyer is not prepared to accept full responsibility for the use of this product, buyer should return unopened kit in original condition to place of purchase. Always follow NAR or TRA Safety Codes when using any model rocket products, and use common sense. This model may require FAA waiver for flight. Consult your local rocket club for more information or contact the NAR or TRA.

INSTRUCTIONS:

☐ Mark both couplers 2” from one end. Apply epoxy to the inside of the 4” long section of airframe and slide the couplers into the airframe up to the marks until they bottom out against each other inside the tube.

☐ Locate both sets of end caps and bulkhead plates. Note that the bulkhead plates are smaller and help to center the end caps over the opening. Apply epoxy between the end-caps and bulkhead plates and clamp until dry. Make sure that all holes line up perfectly and be sure not to get excess epoxy where the end-caps will mate with the bay tube.

☐ Locate both eye-bolt assemblies. Install them as shown in the cut away view. Make sure that the smaller bulkheads face the bottom of the eye-bolts. Be sure to use some epoxy or thread-locker on the threads before tightening.

☐ Install the All-thread rods to the end cap with the nuts and washers as shown in the cut away view. Again, apply epoxy or thread locker to the threads for a permanent installation. Do not apply epoxy to the ends that the wing nuts will be installed on!

☐ Epoxy the two washers to the outside of the other end cap to ensure that they won't get lost in the flying field. Test fit all components after the epoxy is completely dry.

Note that there are two extra wing nuts included. They are for securing your electronics in the bay. Most flyers prefer to mount their electronics to a thin sheet of plywood or G-10 fiberglass sheet that has a length of brass or aluminum tubing mounted to the backside with epoxy. This then slides over the all-thread rod and is secured with a wingnut.

Drill a vent hole if you plan on using barometric based avionics. Use the size bit recommended by your electronics supplier.

Switch Installation Instructions:

Drilling and mounting:
Mark where you want to place the hole for the switch, making sure on smaller diameter airframes that the back of the switch will not hit against your altimeter mounting. When you are pleased with the placement, drill a 3/8" hole through the airframe, and or coupler. Test fit the switch and make sure that there is clearance between the back of the switch and your electronics mount. If you are pleased with the placement, mix up a batch of epoxy and epoxy the switch in the hole. After your model is painted, affix the arming decal to your airframe by peeling off the application tape. The decal will come up with the tape. Line up carefully and press the decal into position, smoothing out the bubbles. Remove the tape and the decal will remain affixed to your rocket.

Attaching to your electronics:

If you have an altimeter with terminals to attach to a remote arming switch, just strip 1/8" off of the end of each wire, tin the ends, and connect to your electronics. If your altimeter does not have a separate terminal for a remote arming switch, you have to wire the switch on the positive lead of the battery. This is done by splicing the switch leads between the battery positive lead, and the altimeter's positive terminal. Be sure to use solder and shrink tubing on the splices.

Switch operation:

The switch closes the circuit by turning the screw clockwise, and opens the circuit by turning counter-clockwise. Be aware that the contact may be intermittent when the screw first closes the circuit, but as it is tightened the circuit becomes complete.

Final finishing:

Harden the ends of the Avionics bay with some thin set CA to make it more durable as well as keep the tubes from fraying or unraveling at the ends. Doing this ensures that your altimeter bay will last a long time. Make sure to sand the roughness off the ends of the tubes after this step and check the fit of the end caps.

Setting up for deployment charges:

We are big fans of the Dog House Rocketry line of products. Their charge wells with integrated holders are the easiest and most complete way of setting your rocket up for deployment. It is the only method we suggest, because it is the best. The link to the full line of Dog House Rocketry products is on the Binder Design home page.