

TOM ARNOLD ON BOXES FOR SHIPPING MODELS

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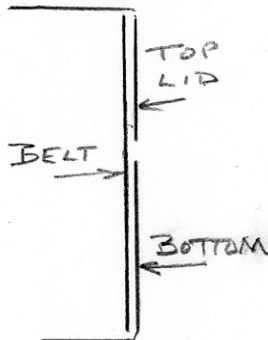
Here's what I have done and this is for shipping models via FedEx as opposed to simple model boxes for car travel.

BOX CONSTRUCTION: The concept is to build a box that will not crush and then to strap the models to the floor of it. There is NO packing like Styrofoam peanuts or bubble wrap involved as all that does is transfer blows right to the model. The only way the model can get damaged is by the box collapsing or a something poking through the wall and reaching the model, both very unlikely with the following construction.

My first step is to find used computer, computer accessories, or moving boxes that are of the DOUBLE-WALLED construction type---real heavy duty things. You can easily see the double wall construction by looking at a cut edge (See sketch)



. Then I cut a "belt" out of the middle of it, leaving a generous top and bottom edge remaining. This cardboard belt was then trimmed to fit around the interior of the bottom edge of the box and glued in place with lots of white glue. The box top could then slide down over this interior lip and rest against the edge of the bottom of the box.



This gave, literally, a double-double-walled side of the box when closed. Of course the top and bottom flaps were glued shut with white glue also. Lots of glue is used---I spread it with a cheap 3" paint brush. Remember that white glue has water in it and the cardboard will warp and not glue flat unless you put weights on everything and be sure to clamp the "belt" to the bottom box edge. My boxes are of different dimensions, as you can imagine, but the height I make is a constant 10".

As far as the models go, I cut little cradles from blue foam (glued down) to hold the models in place and then criss-crossed old strands of broken rubber motors over the tops of the models and to the bottom of the box to hold them in their cradles. The rubber strands don't have to be tight. The rubber strands are looped through little wire hooks that come up through the bottom of the box. The hooks are formed from those big office paper clips that are first straightened out, then a hook is formed at one end, a hole punched through the box bottom with an awl, and the straight wire fed through the hole from the inside of the box. On the outside of the box, a needle nosed pliers then bends the wire at a 90 angle and then in a rough loop as an anchor so the wire won't pull through. The loops are attached flat to the box bottom with a couple of very generous pieces of clear strapping tape and you are set to go.

It may look a bit ratty with the wire loops taped all over but it works like a charm. On big boxes you can build

interior “walls” with blue foam and cut little doorways through to admit fuselage and wing parts as needed but remember, the more openings, the less the strength. If you are real clever, you can strap wings to the top of the box but be real careful that when you slip top and bottom together that everything clears (How do I know that?). For the actual shipping, a single WIDE strip of that nylon strapping tape on each side will do it. The reason I suggest the wide nylon tape as opposed to the clear stuff as I have had the local FedEx office express concern on it coming open with the clear stuff---I think it is psychological as the nylon stuff just looks more substantial. The boxes last for years and the only thing I do to them is rearrange the furniture inside and the hooks .

Does it work? Yep---every time. In the 15 years or so I have been shipping my models this way I can honestly say that the boxes have never failed to protect my models from any outside damage. I HAVE had damage though, and it has all been my fault. I have crammed too many models too tight in a box. You should have at least an inch or so space between things. Little parts have broken loose (don't ship with prop assemblies in place!!) and made hash of things. I have had a rubber strand break and the loose fuselage rattled around and got gouged. That taught me to have 2 separate rubber hold-downs per part and if one broke the other could keep the part in place. But the box itself did the job by not crushing. As a test after I pack things, I shake the box as hard as I can (should be no sound), drop it and finally kick it across the garage floor. If there is damage, better that I find it while I have time to correct it BEFORE the contest than later in my motel room. I had a baggage handler one time tell me that the heaviest boxes go to the bottom of a pile and really light ones get pitched to the top.

THE COST: This is a toughie because rates change regularly with the price of gas. You can go onto both the FedEx and UPS web sites and enter your box dimensions and weight (mine run around 6#) to get a cost. Here's the catch---you don't get a price break in volume like every other business product. The bigger the box, the more it costs and there are break points in the pricing schedule. One of my boxes cost \$13 to Geneseo. Another box only 1 inch bigger cost \$33---that was a nasty surprise and that is only one-way to boot. A rule of thumb is that 2 small boxes will cost a lot less than a similar box twice as big. It appears that your combined height-width-length measurement for both FedEx and UPS should be 60" or less for the least cost. It is best to go on those web sites and play around with the measurements and build accordingly with one model per box. The big box route can also be taken but you have got to squeeze in at least 3 or perhaps 4 models to make it work.

This brings in a new wrinkle that I am dealing with and that is the computer boxes I have used in the past now restrict my airplane sizes. The tail is wagging the dog---I found myself building an airplane to a box size instead of the other way around. You can get a 20" span model (wings disassembled) into a small computer type box pretty easily for the cheapest rate, but my favorite sizes---24" to 36"---are impossible without getting into outrageous shipping rates. So now I am experimenting in building my own custom double-walled cardboard boxes. Wish me luck.

(Ed. Note: If you're going to build your own model shipping box, you might want to go to our website www.pensacolafreeflight.org and look in the “Articles Index” for an article entitled “Model Box, Building in 20 Minutes.” That article describes the construction of a telescoping box which will give double wall construction on each side, but single wall on top and bottom. Using Tom's method of gluing additional sheets of double wall on all the inner surfaces can transform that type box to one of the same durability as Tom's. Building a box from scratch using double wall cardboard is considerably more difficult than doing it with single wall, and you can have flexibility in the size of your models. You can find single wall cardboard scraps at stores which sell large appliances, household storage/shipping companies which sell wardrobe boxes, or you can also often buy 4X8 sheets from picture frame shops)